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ANESTHÉSIE RÉANIMATION

CO-01: PERI-OPERATIVE MAGNESIUM SULPHATE FOR ACUTE PAIN AND ANXIETY AFTER CAESAREAN SECTION

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Introduction: Caesarean section is followed by moderate to severe acute pain, often accompanied by significant post-operative anxiety. Magnesium sulphate, an NMDA-receptor antagonist, reduces pain and opioid consumption after several types of surgery, but its effect on post-caesarean anxiety has not been studied.

Aim: To evaluate the effect of peri-operative intravenous magnesium sulphate on acute pain and state anxiety after elective caesarean section under spinal anaesthesia.

Methods: Prospective, randomised, double-blind, placebo-controlled trial (Monastir, Tunisia, 2022-2023). ASA 1-2; women with a singleton term pregnancy scheduled for elective caesarean section received either 20 mg/kg of magnesium sulphate after foetal extraction then 1500 mg six-hourly for 24 hours, or identical saline. Co-primary endpoints were pain on a visual analogue scale at rest and on movement over 24 hours, and anxiety on the State-Trait Anxiety Inventory.

Results: Seventy women were analysed, thirty-five per arm, comparable at baseline. Magnesium sulphate significantly reduced visual analogue scale scores at rest and on movement throughout the first 24 hours ($p < 0.05$). Rescue analgesia was requested by 71.4 % versus 97.1 % ($p = 0.006$), and median time to first request was doubled (5 [4-7] versus 2.5 [2-3] hours, $p = 0.007$). Post-operative anxiety was present in 2.9 % versus 51.4 % ($p = 0.001$). No difference was found for sleep quality, haemodynamics, renal function or nausea and vomiting, and no adverse effect attributable to magnesium was recorded.

Conclusion: Peri-operative magnesium sulphate provided effective multimodal analgesia and substantially decreased post-operative anxiety, without adverse effects. This anxiolytic effect is an original finding meriting confirmation.

CO-02: ROTEM-GUIDED TRANSFUSION IN POSTPARTUM HAEMORRHAGE: BLOOD PRODUCT USE AND OUTCOMES

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Introduction: Postpartum haemorrhage is frequently complicated by coagulopathy that standard laboratory tests characterise too slowly to guide urgent treatment. Rotational thromboelastometry (ROTEM) provides a rapid, global bedside assessment of coagulation, and a ROTEM-guided transfusion algorithm was introduced in our department in April 2022.

Aim: To assess the effect of a ROTEM-guided transfusion algorithm on transfusion practice and clinical outcomes in women managed for postpartum haemorrhage.

Methods: Quasi-experimental before-and-after study including 46 women managed for postpartum haemorrhage in Monastir, Tunisia. The intervention group comprised women treated according to the ROTEM-guided algorithm; the control group, women managed before its implementation under the conventional strategy. The primary endpoint was red blood cell transfusion. Secondary endpoints were transfusion of other blood products, length of intensive care stay and complications.

Results: Mean age was 32.1 ± 5 years and the groups were comparable, uterine atony being the predominant aetiology. Red blood cell transfusion, universal before implementation (100 %), was required in only 57 % of women managed under the guided algorithm ($p < 0.05$). Fresh frozen plasma use fell from 92 % to 19 % ($p = 0.02$) and fibrinogen use from 84 % to 57 % ($p < 0.05$). Median intensive care stay was shorter (2.1 versus 3.4 days, $p = 0.01$). Mortality was numerically lower in the ROTEM-guided group (4 % versus 8 %).

Conclusion: Introducing a thromboelastometry-guided algorithm reduced the use of all blood products and shortened intensive care stay, suggesting a blood-sparing effect in postpartum haemorrhage that requires prospective confirmation.

CO-03: HEMODYNAMIC CHANGES AFTER PRONE POSITIONING IN LUMBAR SPINE SURGERY USING THE MOSTCARE® SYSTEM.

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Introduction: The prone position is indispensable for posterior spine surgeries but this positional change can lead to alterations in cardiovascular function that demands close monitoring and careful management. The MostCare® system provides the measurement of the main factors of hemodynamics, such as systemic blood pressures, stroke volume, cardiac output,

and vascular resistances. The primary aim of this study was to investigate the changes in hemodynamic parameters that occur when patients are transitioned from the supine to prone position following the induction of general anesthesia.

Methods: This preliminary prospective study enrolled 15 patients (ASA I-II) scheduled for elective lumbar spine surgery between January and August 2025, following approval from the institutional ethics committee. Standard monitoring and radial arterial catheterization were performed. General anesthesia was induced with propofol, sufentanil, and atracurium, and maintained with sevoflurane.

Hemodynamic variables: mean arterial pressure (MAP), systolic and diastolic blood pressures, heart rate (HR), cardiac index (CI), stroke volume variation (SVV), SVRI and PPV were recorded at baseline, supine post-induction, and 5 minutes after prone positioning. Statistical analysis was performed using paired t-tests; $p < 0.05$ was considered significant.

Results: The mean BP decreased significantly (79.6 ± 12.3 mmHg supine vs. 69.9 ± 8.7 mmHg prone, $p = 0.031$) and the diastolic blood pressure followed a similar pattern, decreasing significantly from 60.5 ± 10.3 mmHg in supine to 57.7 ± 8.9 mmHg 5 min after prone positioning ($p < 0.05$).

CI and SV were markedly decreased from 4.5 ± 0.3 to 3.1 ± 0.3 L/minute/m² and 65.27 ± 9.7 to 53.33 ± 9.2 mL, respectively after patients were placed in the prone position ($p < 0.05$). Pulse Pressure Variation (PPV) was lower in the prone position (10.2%) compared to supine (11.8%), but this difference was not statistically significant.

All hemodynamic parameters: Systemic Vascular Resistance (SVR), arterial elastance (Ea), the maximal rate of pressure rise (dP/dt), and Cardiac Cycle Efficiency (CCE) showed no significant changes throughout the investigation.

Conclusion: The prone position induces significant reductions in stroke volume and cardiac index, resulting in decreased arterial blood pressure. These changes appear to be the main determinants of the hemodynamic alterations.

CO-04: ONDANSETRON VERSUS LIDOCAINE FOR REDUCING PROPOFOL INJECTION PAIN: A RANDOMIZED DOUBLE-BLIND PLACEBO

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Introduction: Pain during propofol injection remains a common adverse effect. Although lidocaine is widely used, the efficacy of ondansetron remains controversial, particularly without venous occlusion. This study compared the effects of ondansetron, lidocaine, and placebo on propofol injection pain.

Methods: In this prospective, randomized, double-blind, placebo-controlled trial, 156 adults undergoing elective surgery were randomized to intravenous lidocaine (40 mg), ondansetron (8 mg), or placebo before propofol induction. The study was approved by the local Ethics Committee before patient enrollment and was registered at ClinicalTrials.gov (NCT07632144). All participants provided written informed consent before inclusion. The primary outcome was propofol injection pain (NRS >0) after an initial 50-mg propofol bolus. Secondary outcomes included pain severity, postoperative nausea and vomiting (PONV), satisfaction, intraoperative recall, and hemodynamic changes.

Results: One hundred fifty-five patients were included in the final analysis. Pain incidence did not differ significantly among lidocaine, ondansetron, and placebo groups (46.2%, 55.8%, and 62.7%, respectively; $p = 0.236$). However, pain severity differed significantly among groups ($p = 0.027$), with both active treatments reducing moderate-to-severe pain versus placebo (Figure 1). Hemodynamic changes were comparable. Ondansetron reduced postoperative vomiting versus placebo (4.0% vs 27.9%, $p = 0.002$). Although overall satisfaction did not differ significantly ($p = 0.088$), the proportion of poorly satisfied patients was lower with lidocaine than with placebo (5.9% vs. 25.5%, $p < 0.05$). Intraoperative awareness or memory recall was uncommon and comparable among groups.

Conclusion: Neither lidocaine nor ondansetron significantly reduced the overall incidence of propofol injection pain without venous occlusion. However, both agents reduced the occurrence of moderate-to-severe pain.

CO-05: MELATONIN VS. MIDAZOLAM FOR PREOPERATIVE ANXIETY: A RANDOMIZED, DOUBLE-BLIND COMPARISON OF ANXIOLYSIS

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Introduction: Preoperative anxiety is a major challenge in surgical care that can adversely affect postoperative morbidity and patient recovery. While midazolam remains the traditional standard for anxiolysis, it frequently causes unwanted preoperative sedation. Melatonin has emerged as a promising alternative; this study aimed to compare their anxiolytic and sedative effects against placebo.

Methods: We conducted a prospective, randomized, double-blind trial involving 75 adult surgical patients (ASA physical status ≤ 3) undergoing elective procedures under general anesthesia. Participants were randomly allocated into three equal groups to receive a sublingual solution 90 minutes prior to surgery: midazolam 0.05 mg/kg (Group H), melatonin 0.05 mg/kg (Group M), or 0.9% saline placebo (Group T). Psychological preparation was standardized across all groups. Primary outcomes were anxiety levels assessed using the Visual Analog Scale for Anxiety (VAS-A). Secondary endpoints included pre-induction sedation, orientation, hemodynamic stability, emergence time, and total propofol induction consumption.

Results: At 90 minutes post-administration, VAS-A anxiety reduction was greatest in Group H (-1.6 ± 1.6), followed by Group M (-1.1 ± 1.2) and Group T (-0.5 ± 1.2). Anxiolytic efficacy rates were significantly higher in Groups H (48%) and M (52%) compared to placebo (12%) ($p = 0.005$ and $p = 0.002$), with no difference between midazolam and melatonin ($p = 0.777$). Sedation scores were significantly higher in Group H than Group T, whereas Group M showed no significant difference compared to placebo. Propofol induction doses were significantly lower in Group M than in Group H ($p = 0.042$). Hemodynamics, wake-up times, and post-op delirium incidence were comparable.

Conclusion: Sublingual melatonin is a safe, effective alternative to midazolam for preoperative anxiety. It provides comparable anxiolysis without inducing unwanted preoperative sedation and significantly reduces propofol induction requirements, making it particularly suitable for ambulatory surgery where cognitive preservation and rapid recovery are essential.

CO-06: PREPROCEDURAL ULTRASOUND FOR SPINAL ANESTHESIA IN OBESE PARTURIENTS: A RANDOMIZED CONTROLLED TRIAL

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Introduction: Obese patients undergoing cesarean sections present technical challenges for spinal anesthesia (SA). This study evaluated whether preprocedural ultrasound improves the technical performance of spinal anesthesia in obese parturients undergoing elective cesarean delivery.

Methods: In this single-center randomized controlled trial, parturients with a body mass index ≥ 30 kg/m² scheduled for elective cesarean delivery under spinal anesthesia were randomized to standard palpation (SP) or preprocedural ultrasound (US). Eligible operators were anesthesia residents in their third and fourth year of training. The primary outcome was the first-pass success rate, defined as successful dural puncture on the first skin insertion without needle redirection or reinsertion.

Results: In our study of 90 patients evenly distributed between two groups (45 per group). First-pass success was higher with US than SP (55.6% vs 31.1%, $p=0.19$), and needle redirections were reduced ($P=0.045$) (Table 1). Overall procedural time was longer because of the additional ultrasound assessment ($p < 0.001$), whereas spinal puncture time was similar between groups ($p = 0.796$). Ultrasound-estimated skin-to-subarachnoid depth correlated with actual needle depth (Pearson $r = 0.583$, $p < 0.001$), with a mean difference of -1.88 mm. No significant differences were observed in spinal anesthesia failure, paresthesia, back pain, or patient satisfaction. Overall procedural success reached 100% in both groups, taking into account ultrasound rescue in the landmark failure cases.

Conclusion: Preprocedural ultrasound improved the technical performance of spinal anesthesia in obese parturients by increasing first-pass success and reducing needle redirections, although it required additional preparation time. Furthermore, preprocedural ultrasound served as an effective rescue modality following landmark-guided failure.

CO-07: PREOPERATIVE SARCOPENIA PREDICTS MORBIDITY IN COLORECTAL SURGERY

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Introduction: Sarcopenia is increasingly recognized as an independent predictor of adverse surgical outcomes, including prolonged hospitalization and delayed functional recovery. Despite its clinical relevance, it remains insufficiently screened during preoperative assessments. The primary objective of this study was to evaluate the prevalence of sarcopenia in patients scheduled for colorectal surgery and to analyze its direct impact on postoperative morbidity. The secondary objective

was to establish clinical foundations for tailoring perioperative rehabilitation protocols.

Methods: A single-center, ambispective cohort study was conducted on adult patients undergoing elective colorectal surgery. Preoperative muscle mass was quantified using computed tomography (CT) on an axial slice at the third lumbar vertebra (L3). The diagnosis of sarcopenia was established by calculating the Skeletal Muscle Index (SMI) and Total Psoas Area (TPA). Postoperative complications were defined as the primary clinical outcome, with severity graded according to the Clavien-Dindo classification. Statistical analyses, including Fisher's exact test for categorical variables and Pearson/Spearman correlation coefficients for continuous data, were performed to assess associations. A p -value < 0.05 was considered statistically significant.

Results: The study included a total of 40 patients, with a mean age of 60.1 years. Data analysis revealed a preoperative sarcopenia prevalence of 42.5%. Highlighting the clinical phenomenon of "masked sarcopenia," Body Mass Index (BMI) failed to reflect actual muscle deficits, showing no significant linear correlation with the SMI ($r=0.135$; $p=0.407$). Regarding the primary outcome, preoperative sarcopenia drastically increased the risk of overall postoperative morbidity, affecting 94.1% of sarcopenic patients compared to 43.5% in the non-sarcopenic group ($p=0.001$, Figure 1). Furthermore, major complications (Clavien-Dindo $\geq$ III) were significantly more prevalent in the sarcopenic cohort (68.8% vs. 10.0%, $p=0.044$). Sarcopenic patients also experienced significantly higher rates of de novo anemia (35.3% vs. 0%, $p=0.001$), dehydration (35.3% vs. 4.3%, $p=0.008$), and secondary intensive care unit transfers (29.4% vs. 4.3%, $p=0.022$). Consequently, the median length of hospital stay doubled for sarcopenic patients (16 vs. 8 days, $p<0.001$), demonstrating a moderate negative correlation with the SMI ($\rho=-0.434$; $p=0.006$).

Conclusion: Preoperative muscle mass depletion is a major risk factor for postoperative morbidity and a significant barrier to early recovery in colorectal surgery. These findings strongly advocate for the systematic integration of CT-based sarcopenia screening to adapt Enhanced Recovery After Surgery (ERAS) protocols and initiate targeted multimodal prehabilitation programs prior to surgery.

CO-08: EFFECT OF ONDANSETRON FOR PREVENTING POST-DURAL PUNCTURE HEADACHES AFTER SPINAL ANESTHESIA FOR CESAR

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Introduction: Spinal anesthesia is the preferred anesthetic technique for cesarean sections due to its safety. Post-dural puncture headaches (PDPH) are a relatively common complication. The aim of our study was to evaluate the role of ondansetron in preventing PDPH following spinal anesthesia (SA) for cesarean section.

Methods: This prospective, randomized, controlled, double-blind, two-center study was approved by the local Ethics Committee and registered on ClinicalTrials.gov. Parturients

aged 18 to 45 years scheduled for cesarean section under SA were randomized to receive either 0.10 mg/kg of intravenous ondansetron (Group O) or saline (Group C) five minutes before SA. The primary outcome was the incidence of PDPH within seven days. Secondary exploratory outcomes included headache characteristics, required treatments, and incidence of nausea/vomiting and hemodynamic status during and after surgery.

Results: In total, 281 patients were included (141 in the O group versus 140 in the C group). Demographic, anthropometric and obstetric data were comparable. Group O had a significantly lower incidence of PDPH (14.2%) compared to Group C (27.9%) ($p = 0.005$; OR = 0.396, 95% CI = 0.210–0.746). The day of onset, duration, and severity of headaches, as well as therapeutic requirements, were similar between groups for patients who developed PDPH (table 1). Ondansetron significantly reduced intraoperative nausea and vomiting (24.8% vs. 46.8%, $p < 0.001$) but did not affect postoperative symptoms or hemodynamic requirements.

Conclusion: Prophylactic intravenous ondansetron significantly reduced the incidence of PDPH in parturients undergoing cesarean section. However, it did not affect headache characteristics or therapeutic requirements once PDPH occurred.

CO-09: INTERPERSONAL RELATIONSHIPS BETWEEN ANESTHESIOLOGISTS AND ANESTHESIA TECHNICIANS: IMPACT OF TEAMWORK

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Introduction: The operating room is a high-risk environment requiring close coordination among caregivers. Effective teamwork between anesthesiologists and anesthesia technicians is a key determinant of patient safety, yet the quality of this collaboration and communication in Tunisian practice remains poorly documented. This study aimed to describe the nature of the working relationship between anesthesiologists and anesthesia technicians, and to assess the impact of communication and teamwork on the quality of care.

Methods: We conducted a cross-sectional, mixed-Methods (quantitative-qualitative) study from February to May 2026 across four Tunisian university hospitals (Sousse, Monastir, and Tunis). The study population comprised anesthesia residents, senior anesthesiologists, and anesthesia technicians. Data were collected using a self-administered, anonymous, 36-item questionnaire covering five domains (personal profile, emotions related to teamwork, working conditions, communication, and workplace difficulties), and analyzed with SPSS 20.0.

Results: Eighty questionnaires were completed (response rate 100%; 62.5% female; mean age 38.5 ± 9.5 years), including anesthesia technicians (71.25%), residents (25%), and senior anesthesiologists (3.75%). While 67.5% of respondents were interested in teamwork and 62.5% found it reassuring, over half reported dissatisfaction with their team's performance and a lack of "taste" for team-based work (52.5%). Communication between team members was rated as good by 75% of respondents, though only 52.5% described its intensity as moderate and 15% as strong; just 37.5% felt communication was consistently used to improve work quality. More than half (56%) reported that colleagues were indifferent when difficulties arose, and 42.5% experienced occasional conflicts with coworkers. In case of difficulty, most respondents (75%)

felt supported primarily by anesthesia technicians. Feelings of loneliness in patient management (42.5%) and work-related stress (37.5% occasionally) were also frequently reported, despite an overall satisfaction with working conditions and team solidarity in 60% of cases.

Conclusion: Collaboration between anesthesiologists and anesthesia technicians, while generally positive and supportive, is limited by inconsistent communication, occasional team conflicts, and unequal distribution of support in difficult situations. Strengthening interprofessional communication skills and mutual knowledge between team members appears essential to enhance collaboration, reinforce anesthetic safety, and improve overall quality of care.

CO-10: MEDICO-LEGAL RISK IN REGIONAL ANESTHESIA: A CLINICAL AUDIT FROM A PATIENT SAFETY PERSPECTIVE

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Introduction: Regional anesthesia (RA) offers major benefits, including improved postoperative analgesia and faster recovery. However, RA carries specific risks, and medico-legal claims are increasingly linked not only to complications but also to failures in communication, informed consent, and documentation. In Tunisia, recent legal reforms (Law No. 2024-32) have reinforced patients' rights and medical liability, yet specific regulatory guidance for RA remains lacking, leading to suboptimal compliance with medico-legal documentation standards.

Objective: To assess compliance with patient safety and medico-legal requirements in RA practice at a Tunisian university hospital and identify documentation gaps requiring quality improvement.

Methods: A clinical audit was conducted at Mahdia University Hospital, Tunisia, over a 3-month period. Data were collected retrospectively from 112 adult patients undergoing RA (peripheral nerve blocks and/or neuraxial anesthesia). Audit criteria were developed based on international patient safety principles across four domains: (1) patient information and informed consent, (2) procedural documentation and traceability, (3) safety measures and prevention of complications, and (4) recognition and management of complications. Compliance rates were calculated using descriptive statistics.

Results: High compliance was observed in technical and safety domains: type of RA documented (100%), local anesthetic details (100%), standard safety measures (100%), and post-block monitoring (100%). However, substantial gaps were identified in medico-legal documentation: written informed consent was present in only 22.3% of cases, documentation of oral information in 52.7%, and risk disclosure in 51.8%. Procedural difficulties were documented in only 22.3% of cases. Complications were recorded in 8 cases (1 LAST, 2 hematoma, 5 urinary retention), yet documented management plans were present in only 12.5% of these.

Conclusion: Despite strong adherence to technical safety standards for RA, critical deficiencies in informed consent and complication documentation expose practitioners to significant medico-legal risk. The gap between clinical excellence (100% technical compliance) and administrative documentation (22.3% written consent) represents a key target for quality improvement. Implementation of standardized checklists, written consent forms, and mandatory complication documentation is recommended to align practice with Tunisian legal requirements and international safety standards.

CO-11: POST-INDUCTION HYPOTENSION IN EMERGENCY GASTROINTESTINAL SURGERY: CLINICAL AND ULTRASOUND FACTORS

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Introduction: Post-induction hypotension (PIH) is common during emergency surgery and may impair organ perfusion. Bedside inferior vena cava (IVC) ultrasound may improve pre-induction risk stratification. The aim of the study was to determine the incidence of PIH and identify pre-induction clinical and ultrasound factors independently associated with its occurrence.

Methods: This prospective observational study, approved by the institutional ethics committee, included adults undergoing emergency gastrointestinal surgery under general anesthesia. Patients with preoperative shock, vasopressor use, active bleeding, decompensated heart failure, or arrhythmia were excluded. Blood pressure was recorded before induction and every three minutes for 20 minutes thereafter. Post-induction hypotension (PIH) was defined as at least one decrease of more than 20% in systolic blood pressure from the pre-induction value during this period. Preload dependence was defined as an inferior vena cava (IVC) collapsibility index (cIVC) >40%. Independent associations with PIH were assessed using multivariable logistic regression.

Results: Among 136 evaluable patients, 100 developed PIH (73.5%). Multivariable analysis identified American Society of Anesthesiologists (ASA) physical status III (adjusted odds ratio [aOR] 2.31; 95% confidence interval [CI] 1.08-4.96; $p = 0.031$) and cIVC >40% (aOR 3.18; 95% CI 1.32-7.67; $p = 0.010$) as independently associated with PIH.

Conclusion: PIH occurred in nearly three-quarters of adults undergoing emergency gastrointestinal surgery. ASA III physical status and preoperative cIVC >40% were independently associated with PIH. Bedside IVC ultrasound may complement clinical assessment and help identify patients at increased risk of post-induction hemodynamic instability.

CO-12: MELATONIN VERSUS MIDAZOLAM FOR ANXIOLYSIS BEFORE SPINAL ANESTHESIA IN UROLOGIC SURGERY

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Introduction: Preoperative anxiety is common in patients undergoing spinal anesthesia and may adversely affect perioperative outcomes. Although midazolam is widely used for anxiolytic premedication, its sedative and cardiorespiratory effects may limit its use. This study compared the anxiolytic efficacy and safety of melatonin with those of midazolam in patients undergoing urologic surgery under spinal anesthesia.

Methods: This prospective, randomized, double-blind, double-dummy, single-center trial was conducted from January to March 2026 after ethics committee approval and written informed consent. Fifty adults aged 18–90 years, ASA I–III, undergoing urologic surgery under spinal anesthesia were randomized 1:1 to melatonin (4 mg sublingual, 30–50 min preoperatively plus IV placebo) or midazolam (sublingual placebo plus 1 mg IV midazolam). Anxiety was assessed using the Visual Analog Scale for Anxiety, sedation using the Ramsay scale, and hemodynamic

and respiratory adverse events were recorded.

Results: Fifty patients were included, with a mean age of 65.2 ± 13.9 years. Baseline characteristics and Visual Analog Scale for Anxiety scores before premedication were comparable between groups ($p=0.368$). As shown in Figure 1, anxiety decreased after premedication in both groups. Immediately before spinal anesthesia, the mean score was higher with melatonin than with midazolam (2.48 ± 0.82 vs 1.84 ± 0.85 ; $p=0.009$). Intraoperatively, anxiety decreased further, with no significant difference between groups (1.12 ± 0.88 vs 0.88 ± 0.72 ; $p=0.290$). Hypotension, tachycardia, and decreased respiratory rate were less frequent with melatonin ($p=0.007$, $p=0.025$, and $p=0.036$, respectively). No bradypnea or oxygen desaturation occurred. Mean Ramsay Sedation Scale scores were lower with melatonin than with midazolam (2.75 ± 0.95 vs 3.37 ± 0.74 ; $p=0.013$).

Conclusion: Midazolam provided greater anxiolysis immediately before spinal anesthesia, whereas intraoperative anxiety scores did not differ significantly. Melatonin was associated with lighter sedation and fewer hemodynamic and respiratory adverse events, suggesting a more favorable tolerance profile. Larger multicenter trials are required.

CO-13: SENSORY AND MOTOR PROFILE OF THE PERICAPSULAR NERVE GROUP BLOCK AFTER HIP FRACTURE SURGERY

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Introduction: The pericapsular nerve group (PENG) block targets the articular branches of the femoral, obturator and accessory obturator nerves, inconsistently covered by the fascia iliaca compartment block (FICB). We compared their sensory and motor profile and early recovery.

Methods: Prospective, randomized, single-blind trial in patients over 65 years, ASA I–III, undergoing hip fracture surgery under spinal anaesthesia. Patients received a PENG block or FICB with 20 mL of 0.2% ropivacaine 20 minutes before spinal anaesthesia. Outcomes were sensory block of the thigh at 20 minutes, quadriceps motor function and visual analogue scale (VAS) at 24 hours, time to first analgesic request, and the day-1 change in Quality of Recovery-15 (QoR-15) score.

Results: Seventy-one patients were analysed (PENG 38, FICB 33), comparable at baseline. Sensory block of the medial thigh was obtained in 37/38 (97%) versus 28/33 (85%), $p=0.039$, without difference anteriorly or laterally ($p>0.05$). Quadriceps motor block at 24 hours affected 7/38 (18%) versus 14/33 (42%), $p=0.05$ (absolute risk reduction 24%, number needed to treat 4.2). Time to first analgesic request was 11 ± 5.9 versus 9 ± 4.8 hours ($p=0.09$). VAS at 24 hours was 1 [0–2] versus 2 [0–3] at rest ($p=0.31$) and 3.5 [2–5] versus 4 [3–4.5] on movement ($p=0.67$). Median QoR-15 increase was 20 [14.5–29.75] versus 14 [8.5–29] ($p=0.04$). No block-related complications.

Conclusion: With comparable analgesia, the PENG block provided more consistent medial thigh coverage and preserved quadriceps function in one additional patient in four, with greater improvement in quality of recovery.

CO-14: WHICH GURD AND WILSON CRITERIA SUPPORT THE DIAGNOSIS OF FAT EMBOLISM SYNDROME?

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Introduction: The diagnosis of fat embolism syndrome (FES) rests on the Gurd and Wilson criteria, described in 1974 and still used, no confirmatory test being available. The contribution of each criterion is rarely reported. The aim of this study was to describe the frequency of each Gurd and Wilson criterion and the yield of chest radiography in FES after femoral fracture.

Methods: Retrospective single-centre study (January 2022 – December 2024) of adults admitted with femoral fracture; pertrochanteric, femoral neck and pathological fractures were not included. FES was defined by the Gurd and Wilson criteria; each criterion and all radiographic findings were recorded.

Results: FES was diagnosed in 34/284 patients (12%). Criterion frequencies were: respiratory involvement 33/34 (97.1%), tachycardia 33/34 (97.1%), anaemia 31/34 (91.2%), thrombocytopenia 25/34 (73.5%), neurological involvement 22/34 (64.7%), fever 15/34 (44.1%), retinal abnormalities 6/34 (17.6%), petechial rash (a major criterion) 5/34 (14.7%), fat macroglobulinaemia 1/34 (2.9%) and jaundice 0/34 (0%). The modal profile was two major and three minor criteria. Chest radiography, obtained in 34/34 (100%), showed bilateral alveolo-interstitial infiltrates in 8/34 (23.5%); the remaining 26/34 (76.5%) were normal or non-specific.

Conclusion: The diagnosis of FES was carried by four criteria: respiratory involvement, tachycardia, anaemia and thrombocytopenia. Historically emblematic items contributed little, and chest radiography was non-contributive in three quarters of cases. These proportions are conditioned on a case definition using the criteria themselves and are not sensitivities; they suggest that FES be considered in any femoral fracture with unexplained hypoxaemia and a falling platelet count, without waiting for a rash.

CO-15: EARLY-ONSET VENTILATOR-ASSOCIATED PNEUMONIA AFTER ACUTE BRAIN INJURY IS ALREADY RESISTANT

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Introduction: Empirical antibiotic guidelines for ventilator-associated pneumonia (VAP) separate early-onset episodes (≤ 4 days of ventilation), traditionally attributed to susceptible community-acquired organisms, from late-onset episodes attributed to multidrug-resistant flora. Whether this dichotomy holds after severe brain injury, where intubation is abrupt and frequently pre-hospital, is unclear. We characterised the timing, microbiology, resistance profile and outcome of VAP in this population.

Methods: This was a retrospective cohort of 139, microbiologically confirmed VAP episodes in patients ventilated for severe brain injury in a Tunisian university ICU (2022–2024). Episodes were classified as early-onset (≤ 4 days from intubation) or late-onset (> 4 days). Resistance phenotypes were compared

between groups by Fisher exact test; independent predictors of in-hospital mortality were identified by multivariable logistic regression.

Results: Median age was 47 years (IQR 32–61), 84.2% were male, 69.8% had traumatic brain injury and median Glasgow Coma Scale was 7 (IQR 4–9). VAP occurred a median of 3 days (IQR 2–4) after intubation, and 107 of 138 episodes (77.5%) were early-onset. Gram-negative bacilli represented 145 of 171 isolates (84.8%), dominated by *Klebsiella pneumoniae* (35.1%); classic community-acquired pathogens accounted for only 3 isolates (1.8%). Among early-onset episodes, 22.3% were already resistant to third-generation cephalosporins and 59.6% to amoxicillin-clavulanate, versus 55.2% and 86.2% of late-onset episodes ($p=0.002$ and $p=0.008$). In-hospital mortality was 40.3% and was independently predicted by age ≥ 60 years (aOR 6.27, 95% CI 2.43–16.13), ventilation ≥ 14 days (aOR 2.88, 1.29–6.42) and non-traumatic aetiology (aOR 2.40, 1.02–5.69), but not by any resistance phenotype.

Conclusion: After severe brain injury, VAP arises within days of intubation yet is already dominated by resistant Gram-negative organisms, and classic community flora is virtually absent. Ventilation duration alone is an unsafe guide to empirical therapy in this setting; initial regimens should be driven by local ecology, while survival is determined mainly by host and injury characteristics.

CO-16: POSTOPERATIVE COMPLICATIONS AFTER COLORECTAL RESECTION AND THEIR PREOPERATIVE DETERMINANTS

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Introduction: Colorectal resection is associated with substantial postoperative morbidity and may require critical care. However, local data on postoperative complications, their preoperative determinants, and patterns of intensive care use remain scarce. We described complications, their determinants, and critical care use.

Methods: We conducted a single-center retrospective study from January to June 2026. Resections were identified from the operating theatre register. We reviewed each operative report. Major complications were defined as Clavien-Dindo grade IIIb or higher. Each intensive care admission was classified by its recorded reason: monitoring or organ failure. We used the Fisher exact and Mann-Whitney tests, with significance at $p < 0.05$.

Results: Fifty-one resections were analysed, 26.4% of them urgent. Emergency colectomy represented 45.8% of emergency laparotomies over the period. At least one complication was documented in 36.0% of patients. Major complications reached 8.0%, reoperation 6.5% and death 6.2%. Intensive care was used in 54.0%: 85.2% for monitoring, 14.8% for organ failure. Median intensive care stay was a single day for monitoring, against 8.5 days for organ failure. Preoperative vasopressors were associated with death ($p = 0.003$) and organ failure ($p = 0.002$). ASA ≥ 3 was associated with major complications ($p = 0.010$), and transfusion with any complication (OR = 10.0; $p = 0.003$).

Conclusion: Organ failure accounted for only 14.8% of intensive care admissions after colorectal resection. The remainder may reflect the absence of an intermediate care level. ASA class,

vasopressor support and transfusion, all known before incision, could help guide postoperative care.

CO-17: INCIDENCE AND PREOPERATIVE DETERMINANTS OF MAJOR ADVERSE KIDNEY EVENTS AFTER EMERGENCY LAPAROTOMY

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Introduction: Acute kidney injury (AKI) is a common complication following emergency laparotomy and is associated with adverse short- and long-term outcomes. Major adverse kidney events at day 30 (MAKE-30), a composite of death, renal replacement therapy, and persistent renal dysfunction, provides a patient-centred measure of clinically relevant kidney outcomes. Data on MAKE-30 after emergency laparotomy remain limited. We aimed to determine its incidence and identify preoperative determinants.

Methods: We conducted a single-centre retrospective study including 59 adults who underwent emergency laparotomy between January and June 2026; elective procedures were excluded. Baseline creatinine was defined as the most recent value within the preceding three months or, when unavailable, the admission value. AKI was staged according to KDIGO criteria. Fisher's exact and Mann-Whitney tests were used, with $p < 0.05$ considered significant.

Results: Median age was 60 years, and 26.9% of patients had an ASA class ≥ 3 . AKI occurred in 21.6%, MAKE-30 in 28.3%, and death in 17.5%. ASA ≥ 3 was associated with MAKE-30 (OR 9.3, $p = 0.002$) and death (OR 12.2, $p = 0.003$). Marked leukocytosis or leukopenia (>18 or $<4 \times 10^9/\text{aL}$) was associated with death (OR 14.1, $p = 0.001$). Median days alive and out of hospital at day 30 were 0 in patients with AKI versus 23 in those without ($p = 0.0002$). AKI detection increased with postoperative creatinine sampling.

Conclusion: MAKE-30 affected more than one in four patients. Preoperative ASA class and white blood cell abnormalities were associated with adverse outcomes, supporting early risk stratification. The association between AKI detection and creatinine sampling highlights the need for systematic postoperative renal monitoring.

BIOCHIMIE

CO-18: FACTORS ASSOCIATED WITH BILIRUBIN SEVERITY IN NEONATAL JAUNDICE: A CASE-CONTROL STUDY INCLUDING G6PD

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Introduction: Neonatal hyperbilirubinemia is multifactorial, and both red-cell vulnerability and bilirubin-conjugation pathways may influence bilirubin burden. This study aims to investigate factors associated with neonatal jaundice severity, including total bilirubin, peak bilirubin, G6PD enzymatic activity, and genetic factors, particularly UGT1A1 variants.

Methods: This is a case-control study including 120 neonates: 60 jaundiced cases and 60 controls. Total bilirubin (TB) was measured using the diazo method and G6PD activity by spectrophotometry. UGT1A1 variants, including the TATA-box and Gly71Arg polymorphisms, were analyzed by Sanger sequencing. Statistical analyses were performed using SPSS v.22.0.

Results: The study included 120 neonates, with a mean postnatal age of 4.54 ± 4.61 days and an overall male-to-female sex ratio of 1.31 (68/52). TB concentrations were significantly higher in cases than controls (221.40 ± 55.28 vs. $66.87 \pm 27.55 \mu\text{mol/L}$; $p < 0.001$). G6PD activity did not differ significantly (13.03 ± 4.48 vs. $14.08 \pm 3.43 \text{ U/gHb}$; $p = 0.128$). Among cases, peak bilirubin was higher in phototherapy-treated neonates than in untreated neonates (251.86 ± 54.07 vs. $203.88 \pm 52.33 \mu\text{mol/L}$; $p < 0.001$). UGT1A1 TATA-box genotype was not associated with TB ($p = 0.985$) or peak bilirubin ($p = 0.719$). Combined G6PD/TA7 status was not associated with peak bilirubin ($p = 0.423$). Gly71Arg was absent. Male sex was associated with case status (aOR = 2.86; 95% CI: 1.27–6.44; $p = 0.011$).

Conclusion: G6PD activity and studied UGT1A1 variants were not significantly associated with bilirubin severity in this cohort. These findings suggest that other genetic, clinical, or environmental factors may contribute to the variability in neonatal hyperbilirubinemia severity.

CO-19: IMPACT OF THE 5S-KAIZEN-TQM APPROACH ON STAFF SATISFACTION IN A CLINICAL BIOLOGY LABORATORY

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Introduction: Healthcare institutions frequently encounter organizational dysfunctions that can exacerbate workloads and negatively impact occupational conditions for professionals. Continuous quality improvement initiatives, such as the 5S-KAIZEN-TQM approach, can help optimize workflow organization and the work environment.

Objective: To assess changes in staff satisfaction following the implementation of the 5S-KAIZEN-TQM approach in the clinical biology laboratory at the Mahmoud El Matri Hospital (Ariana).

Methods: A comparative pre-post study was conducted among the laboratory staff. Satisfaction was evaluated using an anonymous, self-administered questionnaire distributed during the pre-implementation phase and re-administered one year post-implementation. Five dimensions were investigated: working conditions and organization, communication and team dynamics, safety and compliance with hygiene protocols, professional development, and overall well-being and satisfaction.

Results: Fifteen staff members participated in the study (mean age: 40.8 ± 5.6 years; M/F sex ratio: 0.25). Post-implementation, the proportion of professionals reporting a heavy workload decreased from 50% to 33%. Satisfaction rates improved regarding laboratory organization (from 50% to 60%) and communication clarity (from 50% to 74%). Adherence to health and safety protocols increased substantially (from 23% to 54%), alongside satisfaction regarding continuing professional development (from 20% to 30%). Overall satisfaction rose from 40% to 60%.

Conclusion: The 5S-KAIZEN-TQM approach showed a favorable trend toward improvement across multiple dimensions of staff

satisfaction, notably regarding organization, communication, and compliance with safety guidelines. It represents a relevant catalyst for the continuous improvement of working conditions in clinical biology laboratories. However, these preliminary findings warrant confirmation through larger-scale studies.

CO-20: THE PREDICTIVE VALUE OF PHENOTYPIC MARKERS IN THE ETIOLOGICAL INVESTIGATION OF NEONATAL HYPOGLYCEMIA

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Introduction: While neonatal hypoglycemia is a critical metabolic emergency, its management requires a rigorous phenotypic approach to guide etiological investigations. This study analyzes the correlation between morphological anomalies and the diagnostic yield of endocrine workups during the "critical sampling window".

Methods: A retrospective descriptive study (2020-2021) was conducted, including 54 cases of documented hypoglycemia (capillary glucose < 2.2 mmol/L or 0.40 g/L) associated with phenotypic red flags. Clinical signs analyzed included macroglossia, wide anterior fontanelle (> 3 cm), facial dysmorphism, midline defects, and umbilical hernia.

Results: An endocrine or syndromic etiology was confirmed in 68% of the cohort. Macroglossia emerged as the most significant predictor (32% of patients, $p < 0.01$), specifically associated with hyperinsulinism in 85% of cases, leading to a diagnosis of Beckwith-Wiedemann Syndrome in 12 patients. While wide anterior fontanelle and facial dysmorphism were not significantly correlated with specific endocrine failures in this series, the presence of at least one dysmorphic sign increased the prevalence of growth hormone deficiency ($GH < 7$ ng/mL) or adrenal insufficiency (cortisol < 50 ng/mL) three-fold compared to the general neonatal population (42% vs. 14%, $p < 0.005$). Notably, midline defects, though rarer (12%), were 100% predictive of panhypopituitarism.

Conclusion: In the etiological investigation of neonatal hypoglycemia, the clinical phenotype serves as a primary "biomarker." The presence of even minor dysmorphic features triples the probability of an underlying endocrine pathology. These findings emphasize that physical examination must trigger systematic critical sampling before any treatment is initiated, optimizing early etiological management and long-term outcomes.

CO-21: URIC ACID TO HDL-C AND TRIGLYCERIDES TO HDL-C RATIOS IN DIABETIC PATIENTS WITH AND WITHOUT CKD

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Introduction: Chronic kidney disease (CKD) is a major complication of diabetes and frequently associated with metabolic disorders such as hyperuricemia and dyslipidemia. The uric acid-to-HDL-cholesterol ratio (UHR) and triglyceride-to-HDL-cholesterol ratio (THR) are potential indicators of metabolic and renal risk. This study aimed to compare UHR and THR between diabetic patients with and without CKD and evaluate their association with renal function.

Methods: A retrospective comparative study included 40 diabetic patients (54–89 years). Patients were divided into CKD and non-CKD groups based on their estimated glomerular filtration rate (eGFR) (2024 KDIGO guidelines). Serum uric acid, triglycerides, HDL-cholesterol (HDL-C), and creatinine were measured using the Cobas c501 analyzer. UHR and THR were calculated by dividing uric acid and triglycerides by HDL-C, respectively. Comparisons used the Mann-Whitney U test, and discriminatory performance of both ratios for CKD was assessed via ROC curve analysis.

Results: UHR was significantly higher in diabetic patients with CKD compared to those without CKD (median [IQR]: 0.402 [0.319–0.480] vs. 0.240 [0.208–0.301]; $p < 0.001$). In contrast, THR did not differ significantly between groups (1.308 [1.076–1.715] vs. 1.197 [0.936–1.490]; $p = 0.596$). ROC analysis revealed that UHR demonstrated good discriminatory performance for CKD (AUC=0.879), whereas THR showed poor discriminatory ability (AUC = 0.551).

Conclusion: UHR was significantly associated with CKD and demonstrated superior discriminatory performance compared to THR in this study population. These findings suggest that UHR may serve as a useful surrogate marker for identifying CKD in diabetic patients.

CARCINOLOGIE MÉDICALE

CO-22: MORTALITY FROM DIGESTIVE CANCERS IN TUNISIAN ELDERLY, 2020

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Introduction: The demographic transition was followed in Tunisia by an increased prevalence in most chronic diseases, such as diabetes, high-blood pressure and cancers. The study aim was to estimate the proportional mortality related to digestive tract cancers in elderly aged over 65 in Tunisia.

Methods: Descriptive study based on data from the national information system on causes of death for 2020. Data were collected from medical death certificates (MDC) received by the National Institute of Health. Causes of death have been coded according to the International Classification of Diseases (ICD-10). Were not included, deaths where cancers were mentioned as contributing factors to death, not the main underlying cause of death. Cspro and SPSS softwares were used for data entry and analysis.

Results: In total 27,783 Medical Death Certificates were enrolled, including 3,529 deaths attributable to cancers and accounting for (12.7%) of all deaths in elderly. Almost 24% of cancer deaths were attributable to digestive cancers. The sex ratio (Male/Female) of our study population was 1.3, and the mean age was 76.4 ± 8.1 years. Leading digestive cancers were

as follows: colorectal (35.8%), pancreas (23.2%), liver (22.4%), stomach (16%), and esophagus (2.5%)

Conclusion: Strengthening secondary prevention measures mainly screening in general and high-risk populations are highly recommended to improve survival rates and to ensure a better quality of life for elderly individuals.

CO-23: NURSES' KNOWLEDGE AND SELF-EFFICACY IN IMPLANTABLE PORT IN ONCOLOGY

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Introduction: Totally implantable venous access ports provide reliable, long-term central venous access for patients receiving chemotherapy. Their safe handling depends largely on nurses and is directly linked to patient safety.

This study aimed to assess the knowledge and self-efficacy of nurses regarding the handling of implantable ports in patients undergoing chemotherapy.

Methods: A cross-sectional, evaluative study was conducted from January to March 2026 across four Tunisian hospitals: the Salah Azaïez Institute, the Military Hospital of Tunis, the Abderrahmen Mami Hospital, and the Aziza Othmana Hospital. A 42-item questionnaire covering sociodemographic data, general knowledge, handling during chemotherapy, complications, and self-efficacy was administered to nurses working in oncology units. Data were analysed using Microsoft Excel.

Results: Fifty-four nurses participated. They were predominantly female (59%), aged mainly 30–39 years (48%), with 5–10 years' experience (43%). Most (69%) had received no specific training on implantable ports. Regarding infection-control measures, 91% correctly selected sterile gloves and 67% identified antiseptic hand-washing as required before handling the port. For flushing, 74% reported pulsed flushing before and after administration. Knowledge of infectious complications reached 89% and of extravasation 80%. Faced with extravasation, 96% would stop the infusion immediately and 98% alert the physician. Self-efficacy was generally high, dominated by "confident" and "very confident" responses.

Conclusion: Nurses showed adequate overall knowledge and self-efficacy but persistent gaps, notably in training coverage and the early recognition of extravasation. Given the vulnerability of oncology patients, structured continuing education on implantable-port handling is essential to strengthen the quality and safety of chemotherapy care.

CO-24: ASSESSMENT OF BREAST CANCER TRAINING AMONG FAMILY MEDICINE RESIDENTS

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Introduction: Breast cancer is the most common malignancy among women in Tunisia and represents a major public health challenge. Early detection and appropriate management largely depend on the training and awareness of family physicians. However, little is known about the adequacy of breast cancer

related education among Tunisian family medicine residents. This study aimed to assess their level of training, satisfaction, and educational needs.

Methods: A descriptive cross-sectional study was conducted among family medicine residents across Tunisia. The questionnaire explored demographic data, satisfaction with current training, preferred learning **Methods**, and perceived educational priorities.

Results: A total of 102 residents participated (mean age = 27 years; sex ratio M/F = 0.2).

Satisfaction with breast cancer-related training was generally low: only 29.4% were satisfied with prevention teaching, 30.4% with screening, and less than 25% with palliative care or complication management. Over half (57.9%) expressed dissatisfaction with post-treatment follow-up training. Clinical experience (54.9%) and case-based learning (88.2%) were the most valued teaching **Methods**. Regarding priorities, nearly all residents strongly agreed that prevention (96.1%), screening (98.1%), palliative care (94.1%), and communication of bad news (92.1%) should be core components of oncology education.

Conclusion: Family medicine residents in Tunisia reported insufficient training in breast cancer prevention and management. Adapting Oncology education to their preferences could better prepare future family physicians for their key role in the prevention, screening, and follow-up of breast cancer.

CO-25: PEDIATRIC MALIGNANT GENITAL TRACT TUMORS: A 16-YEAR TUNISIAN EXPERIENCE

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Introduction: Malignant genital tract tumors are rare childhood malignancies, accounting for less than 5% of pediatric solid tumors. Limited evidence challenges the definition of optimal management and reliable prognostic factors.

Aim: To describe the clinical characteristics, treatment outcomes, and prognostic factors of malignant genital tract tumors in children.

Methods: We conducted a retrospective longitudinal study including children younger than 15 years diagnosed between 2007 and 2023 at the Pediatric Oncology Unit of Bechir Hamza Children's Hospital, Tunis. Overall survival (OS) and prognostic factors were assessed using Kaplan–Meier and Cox regression analyses.

Results: Twenty-five patients were included (18 girls and 7 boys), with a mean age of 5.0 ± 4.7 years. The median diagnostic delay was 38 days (IQR: 25–83), with abdominal pain and/or distension being the most common presenting symptom (56%). Germ cell tumors were predominant (72%), followed by rhabdomyosarcoma (20%) and Burkitt lymphoma (8%). Disease was localized in 64% of patients, and complete remission was achieved in 68% following first-line treatment. The 5-year overall survival rate was 77%. A diagnostic delay of more than 21 days was significantly associated with poorer overall survival ($p=0.003$). Non-germ cell histology ($HR=4.72$; $p=0.039$) and tumor progression ($HR=7.00$; $p=0.006$) were independent predictors of mortality, whereas surgical treatment was associated with improved survival ($HR=0.11$; $p=0.038$).

Conclusion: Pediatric malignant genital tract tumors have favorable outcomes. Early diagnosis, histological subtype, tumor progression, and surgical management appear to be key determinants of survival.

CARDIOLOGIE

CO-26: INTEGRATED ECHOCARDIOGRAPHIC AND CLINICAL ASSESSMENT OF PATENT FORAMEN OVALE IN ISCHEMIC STROKE

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Introduction: Contrast-enhanced transthoracic echocardiography (TTE) with an agitated saline bubble test is a simple, non-invasive method for detecting right-to-left intracardiac shunts in ischemic stroke. Its diagnostic value may be enhanced by transesophageal echocardiography (TEE) and clinical classification systems such as the Risk of Paradoxical Embolism (RoPE) score and PFO-Associated Stroke Causal Likelihood (PASCAL) classification.

Objective: To evaluate an integrated diagnostic approach combining contrast-enhanced TTE, TEE, and RoPE and PASCAL classifications for the etiological assessment of ischemic stroke.

Methods: This prospective observational study included 102 consecutive adults admitted with acute ischemic stroke or transient ischemic attack between November 2025 and June 2026. All patients underwent contrast-enhanced TTE with a bubble test, while patients younger than 70 years subsequently underwent TEE unless contraindicated. RoPE and PASCAL classifications were assessed in patients with a positive bubble test.

Results: Mean age was 60 ± 11 years, and 63% were male. Bubble testing was positive in 11 patients (10.8%), with PFO confirmed by TEE in all cases. Shunts were small in five patients, moderate in two, and large in four. Mean RoPE score was 5.0 ± 2.0 , with five patients scoring ≥ 7 . PASCAL classified three PFO-related strokes as probable, five as possible, and three as unlikely.

Conclusion: An integrated approach combining contrast-enhanced TTE, TEE, and clinical risk stratification provides a comprehensive framework for PFO assessment in ischemic stroke and may improve selection of patients for PFO closure.

CO-27: CACSCORE AS ACCTA GATEKEEPER: CORRELATION WITH PRE-TEST PROBABILITY AND ICA-CONFIRMED OBSTRUCTIVE CAD

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Introduction: The coronary artery calcium (CAC) score, derived from non-contrast CT prior to CCTA, provides an objective measure of coronary atherosclerotic burden. It aligns with ESC 2024 guidelines as a complementary tool for pre-test probability (PTP) refinement, potentially allowing safe deferral of CCTA in low-risk patients with CAC=0 and guiding intensity of downstream workup.

Our objective is to describe the distribution of CAC scores across

PTP strata (ESC 2024) and evaluate their correlation with ICA-confirmed obstructive CAD in a real-world North African cohort. **Methods:** Retrospective single-centre study — CHU Sahloul, 2018–2025. CAC was available in 53/62 patients (Agatston method, non-contrast CT). PTP was stratified per ESC 2024: low (5–15%), intermediate (15–50%), high (50–85%). CAC distribution was compared across PTP strata (Kruskal-Wallis). Median CAC was compared between ICA-confirmed obstructive (n=15) and non-obstructive (n=36) CAD groups (Mann-Whitney U, n=51 with both CAC and ICA).

Results: CAC was available in 53/62 patients (85.5%). PTP-CAC analysis performed in 57 patients.

Across the pre-test probability (PTP) strata, coronary artery calcium (CAC) scores demonstrated a clear gradient. In the low-PTP group (5–15%; n = 38), 76.3% of patients had a CAC score of 0, while none had a CAC score ≥ 101 , with a median CAC score of 0 Agatston units. In the intermediate-PTP group (15–50%; n = 6), the prevalence of CAC = 0 decreased to 16.7%, whereas no patients had a CAC score ≥ 101 ; the median CAC score was 74 Agatston units. In the high-PTP group (50–85%; n = 13), no patient had a CAC score of 0, while 61.6% had a CAC score ≥ 101 , and the median CAC score reached 114 Agatston units. Overall, increasing PTP was associated with progressively higher CAC burden and a lower likelihood of a zero CAC score.

Conclusion: CAC score mirrors pre-test probability: zero calcium in 76.3% of low-PTP patients supports potential deferral of further imaging, while CAC ≥ 101 in 61.6% of high-PTP patients and significant correlation with obstructive CAD (p=0.039) confirm its incremental value as a CCTA gatekeeper, consistent with ESC 2024 guidance.

CO-28: TRANSCRANIAL DOPPLER MICROBUBBLE TESTING FOR PFO SCREENING IN YOUNG ESUS PATIENTS

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Introduction: Patent foramen ovale (PFO) is identified in a substantial proportion of young patients with embolic stroke of undetermined source (ESUS). While transesophageal echocardiography (TEE) is the anatomical gold standard for PFO confirmation, its semi-invasive nature limits first-line use. Transcranial Doppler (TCD) with microbubble contrast provides a non-invasive alternative for right-to-left shunt (RLS) detection. Our objective is to evaluate the diagnostic performance of TCD with agitated saline contrast against TEE for PFO detection in a prospective cohort of young ESUS patients.

Methods: Prospective single-centre study (Sahloul University Hospital stroke unit, 2024). Consecutive patients ≤ 60 years meeting ESUS criteria (exclusion of AF and large-artery atherosclerosis) underwent TCD with agitated saline and Valsalva manoeuvre (RLS graded by Spencer scale 0–V), followed by TEE for anatomical PFO confirmation. Diagnostic indices were computed using TEE as reference standard.

Results: The diagnostic performance of the evaluated metric was favorable, with a sensitivity of 81.5% and a specificity of 90.3%. Its positive predictive value was 88.0%, indicating a high probability of correctly identifying positive cases, while the negative predictive value was 84.8%, reflecting a good ability to exclude the condition in individuals with a negative result. Overall accuracy reached 86.2%. The Youden index was 0.718, suggesting good discriminatory capacity, and the area under

the receiver-operating-characteristic curve was 0.87, consistent with strong overall diagnostic performance. TEE confirmed PFO in 46.6% (27/58). TCD detected RLS in 25 patients: 22 true positives, 3 false positives, 5 false negatives, 28 true negatives.

Conclusion: TCD with microbubble contrast demonstrated high diagnostic accuracy (AUC 0.87, accuracy 86.2%) for PFO detection in ESUS patients. Its non-invasive profile and strong specificity support its use as a systematic first-line screening tool to identify candidates for TEE confirmation and percutaneous PFO closure.

CO-29: BODYMASSINDEX AND NOCTURNAL SYSTOLIC BP LOAD: MARKERS OF CARDIOVASCULAR RISK AFTER COARCTATION REPAIR

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Introduction: After CoA repair, identifying patients at highest cardiovascular risk requires markers beyond mean office BP. Body mass index (BMI) and systolic blood pressure load — especially nocturnal — may provide simple, clinically accessible indicators for intensified surveillance.

Our objective was to compare BMI, daytime and nighttime systolic BP load, and residual isthmus Doppler gradient between normotensive and ABPM-hypertensive patients after CoA repair.

Methods: Monocentric cross-sectional study of 30 patients aged 5–30 years with repaired isolated CoA. Patients were classified by ABPM status (normotensive n=17, hypertensive n=13). Variables compared: BMI, daytime and nighttime systolic BP load, nighttime diastolic BP, and isthmus Doppler gradient.

Results: In this cohort, normotensive participants had a significantly lower BMI than hypertensive participants (18.0 [16.1–19.1] vs. 26.5 [21.1–30.5] kg/m²; p = 0.002). The hypertensive group also demonstrated significantly higher daytime and nighttime systolic blood-pressure loads, reaching 33.0% versus 8.1% during the day (p = 0.017) and 43.0% versus 7.0% at night (p < 0.001). In addition, nighttime diastolic blood pressure was modestly but significantly higher among hypertensive participants (57 vs. 52 mmHg; p = 0.046). Finally, the isthmus gradient was greater in the hypertensive group than in the normotensive group (27.5 [22.5–37.0] vs. 24.0 [15.0–26.0] mmHg; p = 0.007).

Conclusion: Hypertensive patients after CoA repair displayed higher BMI, substantially greater nocturnal systolic BP load, and higher residual isthmus gradient. These simple markers, individually measurable in routine practice, can guide risk stratification and intensify long-term surveillance in the highest-risk subgroup.

CO-30: ACUTE CORONARY SYNDROME IN DISTRICT HOSPITALS: EPIDEMIO-CLINICAL PROFILE OF PATIENTS

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Introduction: Acute coronary syndrome (ACS) is a leading cause of cardiovascular mortality in Tunisia. District hospitals are frequently the first point of contact for patients but lack on-site resuscitation facilities, making prehospital emergency management central to their prognosis. Epidemic-clinical data on ACS handled through this pathway remain scarce.

Aim: To describe the epidemiological and clinical characteristics of ACS patients managed by an emergency medical service (EMS) in district hospitals of Northeast Tunisia.

Methods: Retrospective, observational, single-center study conducted over 16 months (January 2023–May 2024). All patients presenting to a district hospital for whom EMS 01 was solicited, with a final prehospital diagnosis of ACS, were included.

Results: Among 153 calls for suspected ACS, 100 patients were analyzed. Calls occurred mainly in winter, on weekdays and overnight, from the Cap Bon area (Table 1). Mean age was 63.6 ± 13.7 years, with a male predominance. Main risk factors were smoking, hypertension and diabetes; 78% had at least one comorbidity. Chest pain was the presenting symptom. Diagnoses included STEMI (44%), STEMI-equivalent (8%) and NSTEMI-ACS (48%). An immediate invasive strategy was required in 67% of cases. Most patients (82%) were transferred to an emergency department compared to only 12% admitted directly to the cardiac catheterization lab. Prehospital mortality was 6%.

Conclusion: ACS managed through this EMS-coordinated, district-hospital pathway predominantly affects older men with a heavy cardiovascular risk burden, mostly presenting as NSTEMI-ACS, and two-thirds require an immediate invasive strategy, highlighting the need to strengthen catheterization-lab access and transfer networks from peripheral structures.

CO-31: NT-PROBNP FOR RADIOEMBOLIC STROKE DIAGNOSIS: DIAGNOSTIC PERFORMANCE/LOCAL THRESHOLD DETERMINATION

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Introduction: Ischemic stroke (IS) classification requires identifying cardioembolic (CE) mechanisms, especially in paroxysmal atrial fibrillation. NT-proBNP may serve as an early diagnostic marker.

Methods: Retrospective analytical study (January 2023–December 2024) including 628 acute IS patients hospitalized at CHU Sahloul (Sousse, Tunisia) with complete NT-proBNP dosing and TOAST classification. Diagnostic performance was assessed using ROC curves with Youden index for optimal threshold determination. Binary logistic regression was adjusted for age, sex, glomerular filtration rate (eGFR), and NIHSS score.

Results: Among 628 patients (median age 67 years, 59.4% male), 130 (20.7%) had cardioembolic and 498 (79.3%) non-cardioembolic origin. Median NT-proBNP was significantly elevated in CE group (1372 pg/mL vs 122 pg/mL; p<0.001). An etiological gradient was observed: large artery atherosclerosis (96 pg/mL) < other determined causes (125 pg/mL) < small vessel disease (157 pg/mL) < undetermined causes (233 pg/mL) < cardioembolic (1372 pg/mL; p<0.001). Diagnostic performance showed excellent discriminative capacity (AUC=0.839; 95%CI: 0.800–0.873). Optimal threshold of 388 pg/mL provided 84.6% sensitivity, 74.9% specificity, and 94.9%

negative predictive value. After multivariable adjustment, log(NT-proBNP) remained an independent predictor (adjusted OR 2.16; 95%CI: 1.80–2.58; $p < 0.001$) (Figure1).

Conclusion: NT-proBNP is a robust and independent biomarker of cardioembolic mechanisms in IS. Its high negative predictive value reliably excludes CE origin and rationalizes cardiology investigations.

CO-32: FIVE DECADES OF INTERNATIONAL CARDIOVASCULAR RESEARCH: MAPPING SHIFTING PRIORITIES

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Introduction: The growth of cardiovascular research over the past five decades reflects evolving clinical needs and population health priorities. Long-term thematic mapping can provide insights into how these changes have shaped the focus of cardiovascular research worldwide. This study aimed to characterize the evolution of the cardiovascular conditions, comorbidities, and populations studied internationally over a 50-year period.

Methods: The study was performed in May 2024. MEDLINE publications indexed under the exploded Medical Subject Headings (MeSH) descriptor "Cardiovascular Diseases" from 1970 to 2019 were analyzed bibliometrically. Frequencies and proportions of indexed health conditions, associated comorbidities, and study populations were compared across two 25-year periods.

Results: A total of 2,163,207 publications were included in the study. Hypertension remained the leading topic, increasing from 77,690 to 132,454 publications, despite a proportional decrease from 12.1% to 8.7%. Myocardial infarction ranked second in 1970-1994 with 56,620 publications, whereas heart failure ranked second in 1995-2019 with 87,791. Myocardial ischemia rose from 4,057 publications to 34,414. The leading associated condition shifted from arteriosclerosis in the first period (24,727; 3.9%) to stroke in the second (100,322; 6.6%). Obesity increased from 0.8% to 1.7%, diabetes mellitus from 0.9% to 1.5%. Finally, publications involving older adults rose from 23.8% to 29.7%.

Conclusion: Cardiovascular research shifted toward heart failure, ischemic disease, stroke, aging, and cardiometabolic multimorbidity. These findings support integrated prevention and care models addressing hypertension, diabetes, obesity, and cerebrovascular risk.

CO-33: VALVE REPLACEMENT IN WOMEN OF CHILDBEARING AGE: EXPERIENCE OF THE NATIONAL CARDIOLOGY CENTER

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Introduction: Valvular heart disease is a major cause of morbidity among women of childbearing age in low-resource settings, where rheumatic heart disease remains endemic. Pregnancy may worsen pre-existing valvular lesions, exposing these patients to both maternal and fetal risks, particularly in the presence of a mechanical valve prosthesis requiring long-term anticoagulation. In Mauritania, the National Cardiology Center (CNC) serves as the national referral center for the management of valvular heart disease, particularly surgical treatment. To date, no local study has specifically characterized this population of women of childbearing age with valvular heart disease.

Methods: A retrospective, descriptive, single-center study was conducted over a 5-year period (January 2021–November 2025). The inclusion criteria were women aged 15 to 45 years who underwent valvular replacement surgery at the National Cardiology Center (CNC). The variables analyzed included sociodemographic characteristics, medical history, clinical and functional status (NYHA class), echocardiographic findings (type of valvular lesion, left ventricular ejection fraction [LVEF], systolic pulmonary artery pressure [sPAP]), surgical data (type of prosthesis, cardiopulmonary bypass [CPB] and aortic cross-clamp durations), postoperative complications, and maternal-fetal outcomes.

Results: Women of childbearing age accounted for 31.4% of patients hospitalized for VHD. Mean age was 32.4 ± 8.1 years. A history of acute rheumatic fever was identified in 62.5% of cases. Mitral and multivalvular involvement predominated. All patients received mechanical prostheses. Postoperative complications occurred in 75% of patients, principally atrial arrhythmias (40.6%) and infections (31.3%). No in-hospital maternal mortality was recorded. Among five pregnant patients, one fetal death in utero (20%) and three live births were observed.

Conclusion: Valve replacement in women of childbearing age is feasible with satisfactory short-term maternal outcomes but is associated with significant morbidity and a non-negligible fetal risk. These findings underscore the need for multidisciplinary management and preconception planning in this high-risk population.

CO-34: PRIMARY PERCUTANEOUS CORONARY INTERVENTION IN WOMEN

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Introduction: Cardiovascular disease remains the leading cause of death worldwide, and ST-segment elevation myocardial infarction (STEMI) accounts for a substantial share of this burden. Women constitute an under-represented population in interventional cardiology research, often presenting with atypical symptoms that delay diagnosis and treatment. This

study aimed to evaluate the short- and medium-term clinical outcomes of primary percutaneous coronary intervention (PCI) in women.

Methods: We conducted a retrospective, descriptive, and analytical study at the interventional cardiology department of the National Center of Cardiology (Nouakchott, Mauritania), including all women who underwent primary PCI for STEMI between June 12, 2024, and December 14, 2025. Demographic, clinical, biological, angiographic, and procedural data were collected, along with in-hospital and 6-month follow-up outcomes, including major adverse cardiovascular events (MACE) and functional status (NYHA class).

Results: Fifty women with a mean age of 57.98 ± 12.4 years (range 25–83) were included. Traditional cardiovascular risk factors were highly prevalent, including hypertension (66%), obesity (70%), dyslipidemia (60%), and diabetes (54%). Radial access was used in all patients, and drug-eluting stents were implanted in 94% of cases. Procedural success was achieved in 96%, with final TIMI III flow in 92%. In-hospital mortality was low (2%), although in-hospital complications occurred in 48% of patients, most frequently vascular and rhythm-related; hypertension and age over 65 years were independently associated with these complications. At medium-term follow-up, overall mortality reached 18%, and MACE occurred in 26% of patients, significantly associated with age over 65 years and left ventricular ejection fraction $\leq 50\%$. A degraded functional status (NYHA $\geq$ III) was observed in 19.5% of patients at 6 months and was strongly associated with the occurrence of MACE.

Conclusion: Primary PCI is an effective reperfusion strategy in women with STEMI, achieving high procedural success and low in-hospital mortality. However, medium-term prognosis remains burdened by a non-negligible risk of complications and MACE, particularly in older patients and those with impaired left ventricular function, underscoring the need for close post-discharge surveillance in this population.

CO-35: VALUING CLINICAL PHARMACY ACTIVITIES IN A CARDIOLOGY WARD OF A TUNISIAN HOSPITAL

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Introduction: Clinical pharmacy contributes to optimizing medication safety. Activities including medication reconciliation, medication review, identification of medication-related problems (MRPs), and pharmacist interventions can be assessed using quality indicators.

The aim of this work is to evaluate the clinical contribution of a pharmacist in cardiology through implementation of clinical pharmacy quality indicators.

Methods: A six-week prospective observational study was conducted in a cardiology ward of a Tunisian hospital. Patients admitted during the study period and receiving chronic medications were included. Patients with psychiatric disorders, non-cooperative or disoriented patients were excluded. Data were collected from medical records, patient and/or family interviews, and medications brought by patients. Standardized medication reconciliation, medication review, and pharmacist consultation forms were used. Indicators assessed medication reviews and reconciliations, identified MRPs, pharmacist interventions, prescriber acceptance, and problem resolution.

Results: Of 155 admissions, 78 patients were included. Among them, 73 (93.6%) underwent medication review and 68 (87.2%) received admission medication reconciliation. Fifty-

six unintentional medication discrepancies were identified, including 40 clinically significant MRPs, defined as life-threatening problems (71.14%); 39 (97.5%) were resolved. Fifty-five pharmacist interventions were performed, including 38 (69%) targeting clinically significant or potentially harmful medication-related risks; 48 (87.3%) were accepted by prescribers. Twenty-four cases (43.6%) involved contraindicated medications in patients with severe and/or end-stage renal impairment. Among the 68 patients who underwent admission medication reconciliation, 29 (42.6%) also underwent discharge medication reconciliation. Three medication education sessions were provided to patients with heart failure.

Conclusion: Quality indicators demonstrate value of pharmacists' activities and their contribution to medication safety, supporting development of pharmacy services in cardiology.

CO-36: ACUTE ISCHEMIC STROKE: TOAST DISTRIBUTION AND CARDIOEMBOLIC VS NON-CARDIOEMBOLIC COMPARISON

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Introduction: Accurate ischemic stroke etiological classification is essential for targeted secondary prevention. Understanding epidemiological profiles and demographic/clinical characteristics across TOAST subtypes provides context for biomarker discovery.

Methods: Retrospective descriptive study of 628 consecutive acute IS patients (January 2023–December 2024) at CHU Sahloul. Etiological classification was based on standardized TOAST criteria. Demographic variables (age, sex), clinical parameters (NIHSS, comorbidities), and biological markers were systematically recorded. Comparative analysis was performed between CE (n=130) and non-CE (n=498) subgroups.

Results: TOAST distribution (Figure1.): cardioembolic 20.7% (n=130), other determined causes 34.2% (n=215), large artery atherosclerosis 27.2% (n=171), small vessel disease 11.1% (n=70), undetermined 6.7% (n=42). CE patients demonstrated distinct profiles: higher median NIHSS (8 vs 4; $p<0.001$), older age (70 vs 66 years; $p<0.001$), higher prevalence of atrial fibrillation (63.1% vs 12.5%; $p<0.001$), and elevated NT-proBNP (1372 vs 122 pg/mL; $p<0.001$). Female predominance was more pronounced in CE (57.7% vs 50.2%; $p=0.047$). Etiological gradient reflected increasing cardiac involvement: LAA 96 pg/mL < undetermined 125 pg/mL < SVO 157 pg/mL < other determined 233 pg/mL < CE 1372 pg/mL ($p<0.001$). Comorbidity burden (hypertension, diabetes) was comparable between groups.

Conclusion: Cardioembolic strokes represent a distinct clinical phenotype characterized by more severe acute presentation and distinctive biomarker profiles. These epidemiological observations underscore the importance of reliable diagnostic tools such as NT-proBNP for early identification and risk stratification.

CO-37: STEMI IN THE EMERGENCY DEPARTMENT: FACTORS ASSOCIATED WITH THROMBOLYSIS SUCCESS

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Introduction: Thrombolysis remains a major reperfusion strategy in the management of ST-segment elevation myocardial infarction (STEMI), particularly when primary percutaneous coronary intervention cannot be performed within the recommended time frame

Methods: This analytical study included patients with STEMI who received thrombolysis in the emergency department. Clinical characteristics and therapeutic modalities were analyzed and compared according to thrombolysis success or failure

Results: Among 180 patients, 106 (58.9%) received thrombolysis. Thrombolysis outcomes were available for 104 patients: 71 (68.3%) had successful thrombolysis and 33 (31.7%) experienced failure. The median time from symptom onset to presentation was significantly shorter in the success group than in the failure group (2 vs. 3 hours; $p = 0.021$). Dyslipidemia was more frequent among patients with thrombolysis failure than among those with successful thrombolysis (30.3% vs. 9.9%; $p = 0.020$). No significant difference in thrombolysis success was observed between tenecteplase and alteplase (70.0% vs. 75.8%; $p = 0.63$)

Conclusion: In this cohort, thrombolysis was administered to nearly six out of ten patients, with a success rate of 68.3%. Earlier presentation was associated with successful thrombolysis, whereas dyslipidemia was associated with thrombolysis failure. The type of thrombolytic agent did not significantly influence treatment success

CHIRURGIE CARCINOLOGIQUE

CO-38: QUALITY OF LIFE AFTER GASTRECTOMY FOR GASTRIC CANCER: A SINGLE-CENTER EXPERIENCE OF 25 CASES

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Introduction: Gastrectomy remains the cornerstone of curative treatment for gastric cancer, but it is associated with significant long-term functional and nutritional consequences that may impact patients' quality of life (QoL). In low- and middle-income settings, data on postoperative QoL remain limited.

Methods: We conducted a retrospective descriptive study including 35 patients who underwent total or subtotal gastrectomy for gastric adenocarcinoma . Quality of life was assessed postoperatively using a standardized questionnaire evaluating physical status, dietary tolerance, weight loss, social functioning, and global satisfaction. Clinical and nutritional parameters were also analyzed.

Results: The study included 25 patients with a median follow-up of 14 months (range 6–36). Overall, 72% of patients reported a moderate to significant impairment in quality of life. The most frequent complaints were early satiety (68%), postprandial fullness (60%), and weight loss >10% of baseline (64%). Dumping syndrome symptoms were reported in 28% of cases. Patients who underwent total gastrectomy had significantly lower QoL scores compared to those with subtotal gastrectomy. Social reintegration was considered satisfactory in 56% of patients, while 44% reported persistent limitations in daily activities.

Conclusion: Quality of life after gastrectomy remains significantly altered, particularly after total gastrectomy. Nutritional counseling and long-term follow-up are essential to improve functional outcomes and patient satisfaction after gastric cancer surgery.

CO-39: BODY IMAGE AND CONJUGAL DYNAMICS AFTER MASTECTOMY IN A TUNISIAN COHORT

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Introduction: Post-mastectomy psychosocial adaptation is shaped by intersecting physical, relational, and cultural factors. The roles of aesthetic sequelae, reconstructive surgery perception, and conjugal dynamics on body image remain understudied in North Africa. Our aim was to assess how aesthetic sequelae, attitudes toward breast reconstruction, and conjugal changes determine body image and self-esteem after mastectomy in a Tunisian cohort.

Methods: A cross-sectional study was conducted within the gynaecology-obstetrics department of the Monastir Maternity and Neonatology Center, Tunisia, over the calendar year 2024, and enrolled women who underwent total mastectomy for breast cancer. Aesthetic sequelae, attitudes towards reconstruction, and changes in conjugal/family relationships were assessed via telephone interviews. Body image and self-esteem were evaluated using the Body Appreciation Scale (BAS) and Rosenberg Self-Esteem Scale (RSES), validated in Arabic.

Results: In 104 women, the mean age was 56 ± 12 years (range: 31–79). Aesthetic sequelae were reported by 83.7% of patients, with scarring and mammary asymmetry predominating (77.9%). No patient had undergone breast reconstruction ; only 11.5% expressed intent to do so. Self-acceptance was the most cited reason for refusal (39.1%). Among married women ($n=83$), 50.6% reported improved conjugal behaviour following mastectomy. Conjugal dynamics significantly influenced body image ($p=0.001$), with women reporting relational improvement achieving highest BAS scores (33.02 ± 5.96). Aesthetic sequelae ($p=0.003$), scarring/asymmetry ($p=0.016$), and subcutaneous fibrosis ($p=0.032$) were associated with worse BAS and RSES scores.

Conclusion: In this Tunisian cohort, conjugal support and the subjective experience of aesthetic sequelae are primary determinants of post-mastectomy body image. The near-universal absence of breast reconstruction constitutes a significant gap in oncological care. Integrating reconstructive counselling and couple-inclusive support into post-mastectomy pathways is recommended.

CO-40: EPIDEMIOLOGICAL PROFILE OF BREAST CANCER IN YOUNG WOMEN UNDER 35 YEARS AT THE SALAH AZAIEZ INSTITUTE

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Introduction: Young women account for approximately

2–25% of breast cancer cases worldwide. Breast cancer in women younger than 35 years represents a distinct clinical entity, differing from breast cancer in older women in terms of epidemiological characteristics and prognosis. It is more frequently associated with aggressive molecular subtypes, higher histological grade, and advanced-stage disease at diagnosis. In addition, the diagnosis at a young age may have major implications for fertility, family planning, psychological well-being, and quality of life. Therefore, better characterization of breast cancer in young women remains essential to improve early detection and optimize therapeutic management.

Methods: This is a retrospective analytical study of a series of 314 cases of breast cancer in women under 35 years old collected at the Salah Azaiez Institute from January 2010 to December 31, 2018.

Results: During the period from 2010 to 2018, 9583 patients were treated for breast cancer at the Salah Azaiez Institute, among them, 614 women were under 35 years old (6.4%). Our study included 413 files. The mean age was 31 years and the median age was 32 years with extremes ranging from 21 to 35 years. According to the location, the left breast was affected in 201 cases (48.7%) and the right breast in 212 cases (51.3%). The average consultation delay was 3.6 months with extremes ranging from 1 to 24 months. Self-palpation of a nodule was the most frequent reason for consultation with 70.9% of cases, while a skin alteration was the circumstance of discovery in 6.3% of cases. The tumor was located in the upper outer quadrant in 53.5% of cases, followed by the upper inner quadrant with 13.1% of cases. The mean clinical size was 4.4 cm with extremes ranging from 1 to 20 cm. Tumors were classified as T2 in 45.3% of cases, T4 in 24.2% of cases, T3 in 17.2% of cases, and T1 in 12.3% of cases. Lymph node involvement was present in 88.3% of cases, with supraclavicular involvement in 4.1% of cases. In 7.5% of cases, patients were metastatic from the outset.

Conclusion: Breast cancer is increasingly common in women under 35 years old. This cancer requires particular attention in terms of diagnosis, treatment, and psychological support, in order to help these women stay "young" for as long as possible.

CO-41: UTERINE SARCOMAS: A RETROSPECTIVE ANALYSIS OF 47 CASES FROM THE SALAH AZAIEZ INSTITUTE

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Introduction: Uterine sarcomas are rare and aggressive gynecological malignancies characterized by heterogeneous histological subtypes and poor outcomes. Their diagnosis can be challenging, and optimal management remains complex due to the lack of standardized therapeutic strategies. We aimed to describe the epidemiological, clinical, pathological, therapeutic, and outcome characteristics of patients with primary uterine sarcomas treated at the Salah Azaiez Institute.

Methods: We conducted a retrospective single-institution study including 47 patients diagnosed with primary uterine sarcoma and managed at the Salah Azaiez Institute. Demographic, clinical, radiological, pathological, therapeutic, and follow-up data were retrospectively collected and analyzed. Overall treatment strategies, surgical outcomes, recurrence patterns,

and survival status were assessed.

Results: A total of 47 patients with primary uterine sarcomas were included. The median age at diagnosis was 57 years (range, 30–81), with 72.3% being postmenopausal. Abnormal uterine bleeding was the most common presenting symptom (68.1%), followed by abdominal mass (17%). Endometrial biopsy was contributive in only 29.8% of cases. Imaging revealed a mean tumor size of 76.3 mm on ultrasound, while distant metastases were identified in five patients on preoperative CT, mainly pulmonary. Following multidisciplinary discussion, upfront surgery was recommended in 70.2% of patients. Overall, 83% underwent surgery, mainly total hysterectomy with bilateral salpingo-oophorectomy, while radical surgery was required in six patients. No intraoperative complications occurred in 94.7% of cases, while postoperative mortality was 6.4%.

Leiomyosarcoma was the predominant histological subtype (72.3%), followed by carcinosarcoma, endometrial stromal sarcoma, and synovial sarcoma. Surgical margins were negative in 88.9% of cases, and lymph node involvement was identified in 25% of patients. Adjuvant radiotherapy was administered in 42.2% of patients and chemotherapy in 29.5%. After a median follow-up of 36 months, 25.5% of patients developed recurrence. At the last follow-up, nine patients were alive without disease, 14 had progressive disease, and six had died.

Conclusion: Uterine sarcomas remain rare and aggressive tumors, frequently presenting with abnormal uterine bleeding and at an advanced stage. Leiomyosarcoma was the predominant histological subtype in our series. Surgery remains the cornerstone of treatment, although recurrence and disease progression remain significant concerns. Multidisciplinary management and further studies are needed to improve therapeutic strategies and outcomes.

CO-42: PROGNOSTIC FACTORS ASSOCIATED WITH OVERALL SURVIVAL IN YOUNG WOMEN WITH BREAST CANCER

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Introduction: Breast cancer in young women is associated with distinct biological features and prognosis compared with older patients. This study aimed to identify prognostic factors of overall survival (OS) in a cohort of young women with breast cancer.

Methods: We included young women aged ≤ 40 years who were treated for invasive breast cancer at the Regional Hospital of Jendouba, Tunisia, between January 2012 and June 2021. Overall survival (OS) was estimated using the Kaplan–Meier method. Prognostic factors were assessed using univariable and multivariable Cox proportional hazards regression, with hazard ratios (HRs) and 95% confidence intervals (CIs).

Results: The study included 133 patients, with a mean age of 34 years (range, 23–40). Most tumors were T2 (51%), with clinical and histological nodal involvement in 46% and 59% of cases, respectively. Invasive carcinoma of no special type predominated (89%), with 51% of tumors being grade III. Hormone receptors (HR) were positive in 79% of cases and luminal B was the predominant molecular subtype (60%). All patients underwent surgery, mainly mastectomy (66%); 98% received chemotherapy and 92% radiotherapy.

After a median follow-up of 65 months (range, 11–112), the 5-year overall survival (OS) rate was 75.5%. OS differed significantly according to age group (log-rank $p=0.012$), with 5-year OS rates of 48.7% in patients aged <30 years, 83.6% in those aged 30–35 years, and 81.6% in those aged between 35 and 40 years. Patients diagnosed before age 30 years had significantly poorer survival than older patients.

On univariable analysis, younger age (HR 0.91 per year, 95% CI, 0.85–0.97; $p=0.005$), grade III disease (HR 2.82, 95% CI, 1.27–6.26; $p=0.011$), HR positivity (HR 0.47, 95% CI, 0.23–0.96; $p=0.039$), greater nodal burden (HR 1.02 per additional positive node, 95% CI, 1.00–1.03; $p=0.050$), and hormone therapy (HR 0.40, 95% CI, 0.17–0.93; $p=0.033$) were significantly associated with OS. On multivariable analysis, younger age (adjusted HR 0.93, 95% CI, 0.87–0.99; $p=0.031$) and HR positivity (adjusted HR 0.59, 95% CI, 0.28–0.69; $p=0.027$) remained independently associated with OS.

Conclusion: Very young age (<30 years) and HR status were independent adverse prognostic factors for overall survival in young women with breast cancer, underlining the need for closer surveillance and possibly more aggressive management in this subgroup.

CO-43: DETERMINANTS OF DELAYED CONSULTATION IN PATIENTS WITH LOCALLY ADVANCED BREAST CANCER IN TUNISIA

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Introduction: Despite progress in screening and awareness, a substantial proportion of breast cancer cases in Tunisia are still diagnosed at a locally advanced stage. Delayed consultation remains a major contributor, shaped by a complex interplay of socio-cultural, economic, and healthcare system-related barriers.

Methods: We conducted a cross-sectional study of patients diagnosed with locally advanced breast cancer (stage T3–T4, any N, M0) at the Salah Azaiez Institute, Tunis, Tunisia, over a one-month period (March 2026). Data were collected through structured interview questionnaires. Consultation delay was defined as the interval between symptom onset and first medical consultation. Variables analyzed included socio-demographic characteristics, educational level, geographic accessibility, cultural beliefs, use of traditional medicine, and healthcare system factors.

Results: Fifty-two patients (median age 65 years, range 31–78) were included. Tumors were staged T3 in 55% of cases and T4 in 45%. Most patients (75%) experienced a consultation delay exceeding 3 months. Low educational level (33%) and financial constraints (30%) were the most significant barriers, alongside rural residence and limited access to healthcare facilities. Lack of awareness of breast cancer symptoms, fear of diagnosis, social stigma, and reliance on traditional remedies were also identified as important contributing factors.

Conclusion: Delayed consultation among breast cancer patients in Tunisia is driven by multifactorial determinants, predominantly socio-cultural and systemic barriers. Targeted public health strategies focusing on awareness, early detection, and improved healthcare accessibility are essential to reduce diagnostic delays and improve outcomes.

CHIRURGIE DIGESTIVE ET VISCÉRALE

CO-44: QUALITY OF LIFE AFTER VENTRAL HERNIA REPAIR: ONLAY VERSUS SUBLAY MESH REPAIR

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Introduction: Quality of life has now become one of the most important assessments of outcomes following hernia surgery. Carolinas Comfort Scale (CCS) and European Registry of Abdominal Wall Hernias QoL scale (EuraHS) are hernia-specific questionnaires regarding health-related QoL after a mesh hernia repair. The objective of our study was to evaluate the quality of life among patients undergoing two open surgical techniques for ventral hernia repair (Onlay vs sublay repair) using hernia specific scores.

Methods: A comparative prospective cohort was conducted between January 1st 2021 and March the 31st 2023. Patients who underwent elective mesh hernia repair with either Onlay or Sublay technique were included. Patients were called 6 months following the surgery to collect data regarding CCS and EuraHS QoL scores translated in the Tunisian dialect.

Results: A total of 33 patients completed the study. Twenty-one patients underwent sublay mesh placement and 12 underwent onlay mesh placement. There was no difference in the QoL regarding the two surgical techniques. Using CCS and EuraHS scores, pain, sensation of mesh, activity limitations and cosmetic discomfort did not significantly differ between the two surgical techniques 6-months post operatively.

Conclusion: The present study has demonstrated that the two surgical techniques, onlay and sublay repair, were equivalent in terms of QoL for patients undergoing ventral hernia repair.

CO-45: COMPUTED TOMOGRAPHY FOR ABDOMINAL STAB WOUNDS: CAN SURGERY BE SAFELY AVOIDED?

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Introduction: Abdominal stab wounds (ASWs) are a common cause of penetrating abdominal trauma and may result in a wide spectrum of intra-abdominal injuries. Although selective non-operative management has become increasingly accepted in hemodynamically stable patients, the role of computed tomography of the abdomen and pelvis (CTAP) in guiding the decision for surgical exploration remains a matter of debate. As only approximately 40% of patients with ASWs ultimately require laparotomy, accurate identification of those who would benefit from surgery is essential to avoid unnecessary operative interventions. This study aimed to evaluate the diagnostic performance of CTAP in predicting the need for laparotomy in patients presenting with ASW.

Methods: In this retrospective study, patients with ASWs presented between 2013 and 2020 without indication of immediate laparotomy were divided in two groups: CTAP group and exploratory surgery (ES). The medical records of all patients were analyzed. A literature search was conducted to compare the **Results** of our series to the published literature

Results: A total of 136 patients with abdominal stab wounds were included. Immediate laparotomy was performed in 24 patients because of hemodynamic instability and/or

signs of generalized peritonitis. Among the remaining 112 hemodynamically stable patients, 40 (35.7%) underwent surgical exploration (SE), whereas 72 (64.3%) were initially evaluated with computed tomography of the abdomen and pelvis (CTAP). Peritoneal violation was confirmed in 26 patients and was significantly more frequent in the SE group than in the CTAP group (42.0% vs. 12.5%, respectively; $p < 0.001$). In the CTAP group, four patients (5.6%) underwent non-therapeutic laparotomy despite CT findings suggesting the need for immediate surgical intervention. CTAP demonstrated a sensitivity of 91.6%, a positive predictive value of 84.6%, and a negative predictive value of 95.6% for predicting the need for laparotomy.

Conclusion: CTAP is a reliable tool for guiding the management of hemodynamically stable patients with abdominal stab wounds and should be integrated into the diagnostic algorithm. Nevertheless, missed hollow viscus injuries remain possible; therefore, patients with negative CT findings require close clinical observation and repeated examinations to ensure timely identification of occult injuries.

CO-46: BIBLIOMETRICS OF BIOMEDICAL PUBLICATIONS ON ROBOTIC DIGESTIVE SURGERY (MEDLINE: 2015–2024)

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Introduction: Robotic digestive surgery, a minimally invasive technique, is increasingly being applied to complex surgical interventions. Aim: to provide a bibliometric overview of international research on robotic digestive surgery by quantifying productivity and describing main topics, across digestive pathologies and international procedures.

Methods: MEDLINE was queried by combining two MeSH terms: "Robotic Surgical Procedures" and "Digestive System Surgical Procedures", for articles published during the decade 2015-2024 via Web of Science on September 12, 2025. Surgical procedures and morbidity of the digestive system were detailed through their MeSH tree hierarchy. The editorial, methodological, and thematic characteristics of these publications were extracted from the indexing keywords.

Results: Between 2015-2024, MEDLINE included 3454 publications on robotic digestive surgery, indexed by 1396 descriptors, cosigned by 14816 authors, and edited by 260 scientific journals, notably "Surgical Endoscopy" (12%) and "Journal of Robotic Surgery" (7%). The use of robotic digestive surgery was dominated by tumors of the pancreas (13%) and stomach (12%). The most frequently studied digestive procedures were colectomy (16%) and gastrectomy (16%). The most associated morbidities in robotic digestive surgery were overweight and hernia. The most cited article (988 citations) compared the effect of robotic-assisted surgery to conventional laparoscopic surgery.

Conclusion: Over the last decade, the international publications on robotic digestive surgery focused on digestive oncology and the complexity of resections. This bibliometric study highlights the emerging trends in robotic digestive surgery.

CO-47: MANAGEMENT OF THE HERNIAL SAC IN LAPAROSCOPIC REPAIR OF INGUINAL HERNIAS: SYSTEMATIC REVIEW OF RCT

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Introduction: The management of the hernia sac during laparoscopic repair of inguinal hernias (TEP/TAPP) remains a subject of debate. The objective of this study was to compare, through a systematic review and meta-analysis, the postoperative outcomes of reduction (RS group) versus transection (TS group) of the hernia sac.

Methods: This systematic review and meta-analysis was conducted according to the PRISMA 2020 and AMSTAR 2 guidelines; an exhaustive search was performed up to December 10, 2022, in the Cochrane, PubMed /MEDLINE, Google Scholar, Embase, and Scopus databases, without language restrictions. Randomized controlled trials comparing hernia sac resection and reduction during laparoscopic prosthetic repair were included. The primary outcome was seroma formation; secondary outcomes were morbidity, operative time, length of hospital stay, recurrence rate, and postoperative pain.

Results: Six studies were included (2 randomized trials, 4 controlled trials), totaling 2941 patients (821 in the TS group, 2120 in the RS group). The seroma rate was significantly lower in the RS group (OR = 1.71; 95% CI [1.22–2.39]; $p = 0.002$). The length of hospital stay was significantly shorter in the TS group (MD = -0.07; 95% CI [-0.12 to -0.02]; $p = 0.008$). No significant differences were found in morbidity (OR = 0.87; $p = 0.76$), operative time (MD = -4.39; $p = 0.35$), or recurrence (OR = 2.70; $p = 0.25$). Postoperative pain was comparable between the two groups in the four studies that assessed it.

Conclusion: Resection of the hernia sac during laparoscopic repair of inguinal hernias is associated with a lower seroma rate and shorter hospital stay, with morbidity, operative time, recurrence rate, and postoperative pain comparable to those of sac reduction. These **Results** need to be confirmed by larger, multicenter, randomized trials.

CO-48: FACTORS ASSOCIATED WITH SURGICAL INTERVENTION IN ADHESIVE SMALL BOWEL OBSTRUCTION

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Introduction: Adhesive small bowel obstruction is a frequent surgical emergency. Initial non-operative management is effective in many patients, whereas delayed intervention in those with bowel compromise may increase morbidity. Identifying factors associated with operative management may improve early decision-making. This study evaluated the clinical, historical, and biological characteristics associated with surgical intervention.

Methods: We performed a retrospective, single-center study of patients managed for acute adhesive small bowel obstruction between January 2019 and December 2024. Patients with distal obstruction, a non-adhesive etiology, or incomplete records were excluded. Patients were divided into surgical and non-surgical groups. Demographic characteristics, previous abdominal surgery, earlier admissions for obstruction, symptom duration, nasogastric output, and laboratory findings were compared.

Results: The study included 214 patients with a mean age of 58.8 years; 133 were men. Eighty patients underwent surgery, including 37 operated because of severity signs and 43 after

failure of initial non-operative treatment. The remaining 134 patients recovered with nasogastric decompression. Patients undergoing surgery were younger than those managed non-operatively (52.92 versus 62.49 years; $p < 0.001$). A history of abdominal surgery was less frequent in the surgical group (70/80 versus 128/134; $p = 0.016$), and operated patients had fewer previous admissions for obstruction (mean 1.71 versus 3.39; $p = 0.020$). Symptom duration before admission was longer among operated patients (54.03 versus 42.74 hours; $p = 0.033$). Nasogastric output and laboratory parameters, including leukocyte count, C-reactive protein, lactate, pH, bicarbonate, creatinine, platelet count, and hemoglobin, were not significantly different between groups.

Conclusion: Younger age, longer symptom duration, fewer previous obstruction admissions, and the pattern of previous abdominal surgery were associated with operative management. Routine biological markers and nasogastric output alone did not reliably distinguish patients requiring surgery. Decisions should integrate clinical progression, previous surgical history, imaging, and response to initial treatment.

CO-49: INDICATIONS AND SHORT-TERM OUTCOMES OF LIVER RESECTION: A SINGLE-CENTER EXPERIENCE

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Introduction: Liver resection is a potentially curative treatment for several benign and malignant hepatic diseases. Its outcomes depend on the surgical indication, underlying liver condition, extent of resection, and perioperative management.

Methods: We conducted a retrospective study including all consecutive patients who underwent liver resection between January 2016 and December 2025. Demographic and clinical characteristics, underlying liver condition, surgical indication, operative approach, type and extent of resection, associated procedures, operative duration, blood loss, transfusion, and vascular clamping were recorded. Major hepatectomy was defined as resection of three or more contiguous Couinaud segments. Postoperative complications were graded according to the Clavien–Dindo classification. Liver failure and bile leakage were defined according to International Study Group of Liver Surgery criteria. Short-term outcomes included morbidity, reoperation, length of stay, readmission.

Results: A total of 82 patients were included, with a median age of 59 years (51 ;67). The liver was healthy in 89,4%, cirrhotic in 7%, and steatotic or fibrotic in 3,6%. Main indications included colorectal liver metastases (31%), hepatic hydatid cysts (20%), gallbladder cancer (18%), hepatocellular carcinoma (13%). Vascular clamping was performed in 39%, median blood loss was 200 mL (100 ;300), and transfusion was required in 14%. Overall, medical, surgical, and major morbidity rates were 15% and 90-day mortality occurred in 1%. Median hospital stay was 7 days (4 ;10).

Conclusion: These Results provide an overview of our institutional practice and identify potential areas for perioperative improvement.

CO-50: CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY: AN 18-YEAR EXPERIENCE

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Introduction: Peritoneal carcinomatosis has historically carried a poor prognosis. Cytoreductive surgery (CRS) combined with hyperthermic intraperitoneal chemotherapy (HIPEC) has emerged as a locoregional treatment strategy aimed at achieving complete clearance of peritoneal disease while targeting residual microscopic tumor cells through heated intraperitoneal chemoperfusion. This study aimed to describe the epidemiological, surgical, pathological, and chemotherapeutic characteristics of patients undergoing CRS-HIPEC at a single institution, and to explore factors associated with postoperative outcomes.

Methods: We conducted a retrospective single-center analysis of consecutive patients who underwent CRS-HIPEC for peritoneal surface malignancies between 2008 and 2026. Demographic, surgical, chemotherapeutic, histopathological, and outcome data were collected. Completeness of cytoreduction was classified as R0, R1, or R2. Mortality was explored using Fisher's exact test and the Kaplan-Meier method, with $p < 0.05$ considered statistically significant.

Results: Sixty-three patients underwent CRS-HIPEC (mean age 49.9 ± 12.2 years; 60% female). The peritoneal primary was appendiceal in 62% of cases, colorectal in 21%, gastric in 10%, primary peritoneal mesothelioma in 5%, and ovarian in 3%. Among appendiceal primaries, 36% were low-grade mucinous neoplasms, 18% adenocarcinomas, and 21% high-grade lesions, with the remainder undetermined. Peritoneal extent was diffuse in 54% of patients and macroscopically absent in 16% (mean Peritoneal Cancer Index 8.9 ± 8.4). Mean cytoreductive procedure duration was 268.9 ± 99.5 minutes, with perioperative transfusion in 16% of patients and a median hospital stay of 9 days. The first HIPEC was performed for 33.2 ± 5.8 minutes at $42.4 \pm 0.8^\circ\text{C}$, using an oxaliplatin-based regimen in 86% of cases. Complete cytoreduction (R0) was achieved in 75% of patients, with R0/R1 resection in 95% of determinable cases. Procedure-related toxicity was documented in 19% of patients, and surgical complications in 38%, with an 11% reoperation rate. Adjuvant systemic chemotherapy was administered in 19% of patients, predominantly for colorectal primaries (62%). A second HIPEC for peritoneal recurrence was performed in 6% of patients after a mean interval of 18.3 months.

Conclusion: This series demonstrates the feasibility and reproducibility of CRS-HIPEC across a heterogeneous population of peritoneal surface malignancies, with a high rate of complete cytoreduction and an acceptable toxicity profile using a predominantly oxaliplatin-based regimen. The selective use of adjuvant chemotherapy in patients with adverse histopathological features supports a tailored, histology-driven therapeutic strategy. Larger prospective series are warranted to validate the prognostic factors identified in this exploratory analysis.

CO-51: GASTRIC ADENOCARCINOMA IN YOUNG PATIENTS: SURGICAL SAFETY, MORBIDITY, AND MORTALITY ANALYSIS

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Introduction: Radical gastrectomy with extended lymphadenectomy carries potential postoperative morbidity in young patients with gastric adenocarcinoma.

Aim: To evaluate early surgical safety, complications, and postoperative mortality in young patients under 40 years with gastric adenocarcinoma.

Methods: Data from 42 patients aged <40 years undergoing gastrectomy for gastric adenocarcinoma. (2000–2023). Were analyzed postoperative complications and management strategies.

Results: Postoperative mortality was zero. Early complications included wound infection (n=3, medical management), anastomotic leak (n=1, medical management), intra-abdominal abscess (n=1, percutaneous drainage), acute cholecystitis (n=1, cholecystectomy), pleural effusion (n=1, chest tube drainage), and urinary tract infection (n=1, medical management). Late complications included one hemorrhagic anastomotic ulcer at 13 months managed with proton pump inhibitors and one late dumping syndrome at 17 months treated with somatostatin analogues and dietary modification.

Conclusion: Major gastrectomy in young adults with gastric adenocarcinoma is safe, yielding zero early mortality and manageable postoperative complications.

CO-52: PREDICTORS OF INFECTED PANCREATIC NECROSIS DURING ACUTE PANCREATITIS: A RETROSPECTIVE COHORT STUDY

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Introduction: Infected pancreatic necrosis is one of the most severe complications of acute pancreatitis and is associated with prolonged hospitalization, invasive procedures, and increased mortality. Early identification of patients at risk could improve monitoring and therapeutic decision-making. This study aimed to identify factors associated with infected pancreatic necrosis during a first episode of acute pancreatitis.

Methods: We conducted a retrospective single-center study including patients admitted for a first episode of acute pancreatitis between January 2017 and December 2023. Patients with recurrent pancreatitis or incomplete medical records were excluded. Demographic characteristics, ASA classification, systemic inflammatory response syndrome (SIRS), biological markers, etiology, and radiological severity were analyzed. Infected pancreatic necrosis was the primary outcome. Associations were assessed using the chi-square or Fisher's exact test, with statistical significance defined as $p < 0.05$.

Results: A total of 290 patients were included. Median age was 53 years (range: 19–91), and biliary pancreatitis was the predominant etiology (57%). Infected pancreatic necrosis occurred in 32 patients. ASA II ($p=0.040$) and particularly ASA III ($p<0.010$) were significantly associated with this complication. Severe systemic inflammation, represented by SIRS 3, was also associated with infected necrosis ($p<0.010$), whereas SIRS 2 was not significant ($p=0.067$). Admission leukocytosis $>14,000/\text{mm}^3$ and C-reactive protein $>130 \text{ mg/L}$ were significant biological predictors (both $p<0.010$). Balthazar grade E was strongly associated with infected necrosis ($p<0.010$), while grade D was not. Neither biliary nor other etiologies were significantly associated with necrosis infection.

Conclusion: Patient comorbidity, severe systemic inflammation, elevated inflammatory markers, and advanced radiological

severity were associated with infected pancreatic necrosis. Combining these readily available parameters may help identify high-risk patients requiring closer surveillance.

CO-53: FACTORS ASSOCIATED WITH IN-HOSPITAL MORTALITY IN ACUTE PANCREATITIS

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Introduction: Although most patients with acute pancreatitis experience an uncomplicated recovery, severe forms may progress to organ failure and death. Identifying mortality-related factors at an early stage is essential for appropriate triage and intensive management. This study evaluated the factors associated with in-hospital mortality during acute pancreatitis.

Methods: This retrospective single-center study included 290 patients admitted with a first episode of acute pancreatitis between 2017 and 2023. Demographic characteristics, ASA classification, SIRS criteria, admission white blood cell count and C-reactive protein, Balthazar grade, and intensive care unit requirements were analyzed. Mortality was defined as death during the index hospitalization. Categorical variables were evaluated using the chi-square or Fisher's exact test, with $p < 0.05$ considered significant.

Results: Five patients died during hospitalization, corresponding to an overall mortality rate of 1.7%. Two deaths were related to multiple-organ failure, while three occurred following open necrosectomy. Mortality was significantly associated with ASA II ($p=0.020$) and ASA III status ($p<0.010$). SIRS 3 was associated with an increased mortality rate of 7.2% ($p=0.040$), whereas SIRS 2 was not significant ($p=0.570$). Admission C-reactive protein $>130 \text{ mg/L}$ was strongly associated with mortality ($p=0.004$). In contrast, leukocytosis $>14,000/\text{mm}^3$ did not significantly predict death ($p=0.200$). Balthazar grade E was associated with mortality ($p<0.002$), while grade D was not. Age ($p=0.060$) and sex ($p=0.700$) showed no significant association. Intensive care unit admission was also associated with an unfavorable outcome.

Conclusion: ASA classification, severe SIRS, elevated C-reactive protein, advanced radiological severity, and intensive care requirements were associated with in-hospital mortality. Because only five deaths occurred, these Results should be considered exploratory and require confirmation in larger cohorts.

CO-54: ACUTE CHOLANGITIS IN ELDERLY PATIENTS: PREDICTORS OF MORBIDITY AND MORTALITY IN A REGIONAL HOSPITAL

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Introduction: acute cholangitis in the elderly is a diagnostic and therapeutic challenge. The clinical picture is often frustrated or atypical, the anaesthetic risk is increased, infectious complications are more frequent, hence a higher mortality than in young subjects. Early recognition of the predictors of morbidity and mortality becomes necessary to improve the management of these patients.

Methods: This is an observational, retrospective, longitudinal

and monocentric study, conducted in the general surgery department of the Regional Hospital of Jendouba. It was conducted over a period of five years, from January 1, 2019 to December 31, 2024, and involved 50 patients over the age of 65, hospitalised for acute cholangitis diagnosed and treated within the same department. The purpose of our study is to clarify the factors associated with mortality and morbidity in this population.

Results: Regarding mortality, in the light of the multivariate analysis, we retained: tachypnea ($p=0.03$), hyperleukocytosis ($p=0.034$), a CRP value greater than 10mg/l ($p=0.032$), and choledochotomy ($p=0.001$) as factors associated with mortality. Endoscopic drainage ($p=0.003$) is considered to be statistically protective.

Regarding morbidity, multivariate analysis has found that age above 75 years ($p=0.041$), diabetes ($p=0.007$), hypertension ($p=0.016$), choledochotomy ($p=0.005$) and the placement of a kher drain ($p=0.038$) are predictors of morbidity. Endoscopic drainage with ($p=0.038$) is considered statistically protective.

Conclusion: In a Tunisian context marked by a rapid ageing of the population, this issue will take on an increasing role in the coming years. Our **Results** thus argue for the development of specific management protocols for elderly patients and for better coordination between emergency, surgical, intensive care and gastroenterology departments.

CO-55: MANAGEMENT OF HEPATIC HYDATID CYSTS IN JENDOUBA, TUNISIA: A DESCRIPTIVE STUDY IN AN ENDEMIC AREA

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Introduction: Hydatid cyst of the liver remains a real public health problem today in Tunisia and particularly in the northwest regions. Surgical management remains the therapeutic modality of reference. However, this treatment is marked by significant morbidity and mortality and must be taken into consideration to ensure adequate management. In this work, our objective is to describe the epidemiological, diagnostic and therapeutic aspects of the hydatid cyst of the liver in a highly endemic area in Tunisia: Jendouba in order to contribute to a better understanding of local particularities and to propose more targeted therapeutic attitudes to this population.

Methods: It is a retrospective descriptive study spanning 11 years from 01/01/2013 to 31/12/2023 in the general surgery department of the regional hospital of Jendouba and included 112 patients. All patients operated for hydatid cyst of the liver throughout the study period were included. The positive diagnosis was retained according to the preoperative radiological data (abdominal ultrasound or abdominal CT scan) and confirmed for all intraoperative patients. Patients below 15 years of age, patients who had undergone medical treatment without surgery and patients with extra-hepatic localization without associated hepatic localization were not included in the study.

Results: In the study population, the mean age was 42.1 years. Nineteen patients (17%) had a history of surgery for hydatid cysts. The median duration of symptoms was one month. Regarding laboratory findings, hydatid serology was performed in 55 patients (49.1%), with 52 tests positive. Liver function tests were abnormal in 49 patients (43.8%). Radiologically, 97 patients underwent abdominal ultrasound (86.6%), which led to a definitive diagnosis of hydatid cyst. The mean cyst size on ultrasound was 8.7 ± 2.8 cm. Eighty-seven cases presented with

a single hydatid cyst (89.7%), nine patients had two hydatid cysts, and one patient had three cysts. A biliary fistula was found in 28 patients. An abdominal CT scan was performed in 109 patients (97.3%). A complicated cyst was identified on the CT scan in 50 patients (45.9%). Regarding surgical data, 47 patients underwent emergency surgery (42%). Intraoperatively, the mean cyst size was 9.45 ± 3.29 cm, and biliary content was the most frequent (42%). A fibroblastic cyst (FBC) was identified in 78 patients (69.6%), and was solitary in 54.5% of cases. Conservative treatment was the most common surgical approach (92%). Forty-seven patients experienced early postoperative complications, including 34 cases of specific surgical complications (30.4%). There were 4 deaths in our series (3.6%).

Conclusion: Currently, our work is one of the most relevant series in the northwest that evaluates the management in endemic areas of hydatid cyst of the liver, providing a true reflection on the evolution of the pathology in these areas.

CO-56: COMPLICATED CROHN'S DISEASE REQUIRING SURGERY: CLINICAL CHARACTERISTICS, OPERATIVE MANAGEMENT, AND E

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Introduction: Despite major advances in immunomodulators and biologic therapies, surgery remains an essential component in the management of complicated Crohn's disease (CD). Surgical indications, operative techniques, and postoperative outcomes vary according to disease phenotype, while data from North Africa remain limited.

Methods: A retrospective, single-center descriptive and analytical study was conducted at the Department of General Surgery of Fattouma Bourguiba University Hospital, Monastir, Tunisia. All patients aged 12 years or older who underwent surgery for histologically confirmed Crohn's disease between January 2021 and December 2025 were included. Epidemiological, clinical, biological, endoscopic, radiological, operative, pathological, and postoperative data were collected. Statistical analyses included descriptive statistics, univariate analysis, and multivariate logistic regression.

Results: A total of 54 patients were included. The mean age was 37.3 ± 15.5 years, with a male predominance (64.8%). Ileal involvement was the most frequent disease location (48.1%), while penetrating disease was the predominant phenotype (37.0%). The leading indications for surgery were symptomatic intestinal strictures (42.6%), refractory fistulizing disease (20.4%), and intra-abdominal abscesses (16.7%). Laparoscopy was performed in 48.1% of patients, and ileocecal resection was the most common procedure (77.8%). Postoperative recovery was uneventful in 61.1% of patients, whereas 38.9% developed postoperative complications. Multivariate analysis identified disease duration <5 years ($OR = 5.75$; $p = 0.017$) and C-reactive protein ≥ 10 mg/L ($OR = 12.95$; $p = 0.006$) as independent predictors of penetrating disease. Disease duration ≥ 5 years ($OR = 8.25$; $p = 0.018$) was independently associated with stricturing disease. Extraintestinal manifestations independently predicted postoperative recurrence ($OR = 6.83$; $p = 0.014$).

Conclusion: Complicated Crohn's disease requiring surgery predominantly affects young adults and is mainly characterized

by stricturing and penetrating complications. Ileocecal resection, most commonly performed laparoscopically, remains the cornerstone of surgical treatment. Disease duration, inflammatory activity, and extraintestinal manifestations significantly influence disease behavior and postoperative recurrence. Early multidisciplinary management is essential to optimize surgical outcomes.

CHIRURGIE NEUROLOGIQUE

CO-57: DESCRIPTIVE STUDY OF 32 CASES OF PITUITARY APOPLEXY MANAGED BY TRANSSPHENOIDAL SURGERY

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Introduction: Pituitary apoplexy (PA) is a rare but potentially severe neuro-endocrine emergency resulting from acute hemorrhage and/or infarction within a pre-existing pituitary adenoma. We describe the epidemiological, clinical, hormonal, radiological, and pathological features of a surgical cohort of PA. **Methods:** We conducted a retrospective, single-center cohort study of 32 patients who underwent transsphenoidal surgery for PA at the National Institute of Neurology of Tunis over a 14-year period (2010–2023). Clinical, ophthalmological, hormonal, radiological, and histopathological data were collected and analyzed.

Results: The mean age at diagnosis was 52.3 ± 13.6 years, with a male predominance (59.4%, sex ratio 1.46). Headache was the most frequent symptom (72.2%), followed by vomiting (31.3%) and meningismus (34.4%). Visual acuity was decreased in 78.1% of patients, with severe impairment in 62.5% of affected eyes, and bilateral visual field defects were found in 53.1%. Oculomotor palsy was present in 46.9% of patients. Non-functioning adenomas accounted for 75% of cases, and 62.5% of patients had anterior pituitary insufficiency (partial in 37.5%, complete in 25%). On MRI, 84.4% of adenomas measured ≥ 2 cm, with suprasellar extension in 68.8%, and a T1 hyperintense signal was present in 65.6%. Histopathology showed necrosis in 40.7%, hemorrhage in 37.5%, and a combination of both in 21.9%. The median time from apoplexy to surgery (ATS) was 5 days; 62.5% of patients were operated within 7 days. Postoperatively, visual acuity improved in 59.4% of patients at 1 and 6 months, fundoscopic findings improved in 84.4%, visual field defects improved in 87.5%, and oculomotor function improved in 93.7% at 6 months. Diabetes insipidus (18.8%) and corticotrophic insufficiency (15.6%) were the most common postoperative complications.

Conclusion: This series confirms that PA predominantly affects middle-aged men with large, non-functioning macroadenomas, frequently complicated by visual and hormonal deficits. Transsphenoidal surgery, performed within a median delay of 5 days, was associated with favorable functional outcomes across all visual parameters, supporting its role as the cornerstone of management.

CO-58: PROGNOSTIC FACTORS FOR VISUAL RECOVERY AFTER SURGERY FOR PITUITARY APOPLEXY

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Introduction: Visual impairment is among the most feared consequences of pituitary apoplexy (PA), and identifying factors that predict visual recovery after surgical decompression remains a clinically relevant question.

Methods: In a retrospective cohort of 32 patients surgically treated for PA via the transsphenoidal route, we analyzed the influence of clinical (age, sex, comorbidities), endocrine (tumor secretory status, anterior pituitary insufficiency), radiological (tumor size, extension, T1 hyperintensity), histopathological (necrosis vs. hemorrhage), and temporal (time from apoplexy to surgery) factors on postoperative recovery of visual acuity, fundoscopic findings, visual field, and oculomotor function. Univariate analysis was performed using Chi-square or Fisher's exact test, with a significance threshold of $p < 0.05$.

Results: Overall, postoperative improvement was observed in 59.4% of patients for visual acuity, 84.4% for fundoscopic findings, 87.5% for visual field, and 93.8% for oculomotor function. Age, sex, diabetes, hypertension, tumor secretory status, and the degree of anterior pituitary insufficiency were not significantly associated with visual outcome for any parameter ($p > 0.05$). Anticoagulant/antiplatelet use was significantly associated with absence of visual field improvement (75.0% vs 7.1%, $p = 0.008$). Tumor size, suprasellar/parasellar extension, and T1 hyperintensity on MRI did not significantly influence recovery, except for a parasellar extension being associated with poorer fundoscopic recovery ($p = 0.002$). Histopathological pattern (necrosis, hemorrhage, or both) showed no significant association with any visual outcome. A shorter time from apoplexy to surgery (≤ 7 days) was associated with a non-significant trend toward better recovery of visual acuity (68.4% vs 50%), visual field, and oculomotor function.

Conclusion: In this series, most classical clinical, endocrine, radiological, and pathological variables did not significantly predict visual recovery after surgery for PA, except for anticoagulant use (associated with worse visual field outcome) and parasellar extension (associated with worse fundoscopic outcome). A trend favoring early surgery was noted but did not reach statistical significance, likely reflecting limited sample size. These findings underline the overall favorable visual prognosis of surgically treated PA, largely independent of baseline tumor characteristics.

CHIRURGIE PÉDIATRIQUE

CO-59: PEPTIC ESOPHAGEAL STRICTURES IN TUNISIAN CHILDREN: FOUR DECADES OF EVOLVING MANAGEMENT AND DECLININ

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Introduction: Peptic esophageal stricture (PES) is an uncommon complication of gastro-esophageal reflux disease (GERD) in children. Treatment is curative; involving pharmacologic therapy

followed by esophageal dilatation (ED) and anti-reflux surgery. Aim: To assess how ED has evolved over the past four decades. This includes indications for its use, utilization trends, and the underlying factors driving changes in its use.

Methods: A retrospective study evaluating the practice of ED, from January 1986 to January 2026, performed in the department of pediatric surgery of Monastir Hospital. Data were collected from patients' hospitalization records.

Results: Eighty-three patients were diagnosed with PES between January 1986 and January 2026. The mean age at consultation was 3 years and 9 months. 57 patients underwent ED, with 184 dilation procedures performed. Savary-Gilliard bougies were used for ED until 1998, when balloon dilation became the preferred technique, performed under general anesthesia and endoscopic control. Twenty patients required pre-operative dilatation, 25 had dilatation during anti-reflux surgery and 43 others post-operatively which occurred at a median of 9 months (15 days to 9 years). The mean annual frequency of ED decreased from three procedures per year before 2016 to one procedure every two years over the last six years. This decline coincided with a decrease in the incidence of PES, with only four cases reported during the last six years.

Conclusion: Our findings may reflect improvements in the management of GERD, which has led to a reduced occurrence of PES and consequently a decreased need for ED.

CO-60: THE NEXUS BETWEEN SURGICAL PREDICTION, CAPACITY SIMULATION, AND PEDIATRIC SCHEDULING: A CASE STUDY

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Introduction: Variability in surgery duration, workload changes, restricted operating room capacity, and patient sequencing all have a significant impact on operating room performance. Using actual data from 118 patients at the Regional Hospital of Zaghouan, Tunisia, this study assesses a data-driven decision-support method for evaluating pediatric operating room administration.

Methods: Two complimentary prediction models, ARIMA and XGBoost, were used to study surgical operation time, and the operational consequences of workload and capacity fluctuations were investigated using discrete event simulation. By contrasting First Come, First Served (FCFS), Shortest Processing Time (SPT), and Longest Processing Time (LPT) in a typical three-room setup, patient sequencing was further assessed.

Results: With average RMSE, MAE, MAPE, and R2 values of 30.00 minutes, 22.20 minutes, 58.98%, and 0.059, respectively, XGBoost outperformed ARIMA in predicting performance, while ARIMA's values were 32.64 minutes, 24.09 minutes, 66.82%, and -0.086. According to simulation, a single-room arrangement had a mean waiting time of 1854.13 minutes, whereas a reduction in capacity from three to two rooms increased the mean waiting time to 60.27 minutes. Among sequencing techniques, SPT produced a greater maximum waiting time but decreased mean waiting time by 17.80% compared to FCFS.

Conclusion: These Results emphasize the significance of taking

into account surgical duration variability, operating room capacity, and patient sequencing in tandem when assessing alternative pediatric operating room management strategies.

CO-61: SURGICAL MANAGEMENT AND OUTCOMES OF CONGENITAL DIAPHRAGMATIC HERNIA IN CHILDREN

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Introduction: Congenital diaphragmatic hernia (CDH) is a major malformation that can present with severe neonatal respiratory distress. Its management relies on optimal preoperative stabilization followed by surgical repair. Prognosis is mainly influenced by the severity of pulmonary hypoplasia.

Methods: We retrospectively reviewed children who underwent surgical treatment for CDH in our department between 2016 and 2025. Demographic characteristics, clinical presentation, anatomical findings, surgical approach, intraoperative procedures, and postoperative outcomes were analysed.

Results: The study included 15 boys and 13 girls. Eighteen patients presented with neonatal respiratory distress, including eight with an antenatal diagnosis. Eight patients had a delayed presentation, with a mean age at diagnosis of 2 years. The diagnosis was confirmed by chest radiography. The defect was left-sided in 76% of cases, right-sided in 8%, and corresponded to a Morgagni hernia in 16%.

Eighteen patients underwent repair through a subcostal laparotomy. Two patients initially underwent laparoscopy followed by conversion to a supra-umbilical vertical midline laparotomy. The four patients with Morgagni hernia were approached through a supra-umbilical vertical midline incision. A hernia sac was identified and resected in 20 patients. Three patients had intestinal malrotation with a common incomplete mesentery, requiring repositioning. Primary diaphragmatic repair was achieved in all patients; tension sutures were required in four cases, and none required prosthetic patch reinforcement. Postoperative outcomes were favourable.

Conclusion: CDH remains a potentially life-threatening congenital anomaly requiring multidisciplinary management and surgical repair after adequate stabilization. Primary repair can be achieved in most cases without the need for prosthetic patch reinforcement, with favourable postoperative Results.

CO-62: THE DIAGNOSTIC ROLE OF URETHROCYSTOSCOPY IN THE EVALUATION OF PAEDIATRIC HAEMATURIA

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Introduction: Haematuria is defined as the presence of an abnormal number of red blood cells in the urine ($\geq 10/\text{mm}^3$ or $10,000/\text{mL}$). It represents an important warning sign that requires thorough clinical, biological, and radiological evaluation to determine its etiology. In selected cases, lower urinary tract exploration using bladder endoscopy (urethrocystoscopy) may be required.

Methods: We conducted a retrospective descriptive study over a 5-year period, including children referred from paediatric departments for urethrocystoscopy as part of the evaluation of haematuria.

Results: Thirty-one children were included: 23 boys and 8 girls. The mean age was 9.5 years. Haematuria was terminal in 21 cases and total in 10 cases.

All patients underwent biological assessment, urine cytobacteriological examination (CBEU), and renal and bladder ultrasonography. Ultrasound was abnormal in 24 cases, revealing a bladder mass in 4 cases and circumferential bladder wall thickening in 1 case.

Cystoscopy was performed in 19 patients. It confirmed the presence of a bladder tumour in 3 cases, all of which underwent biopsy. Other findings included haemorrhagic cystitis in 9 cases and bladder mucosal ulceration in 2 case requiring biopsy. Urethritis was also observed in 11 boys.

Conclusion: Despite advances in imaging modalities, urethrocytoscopy remains a key diagnostic tool in the etiological evaluation of haematuria in children. It allows direct visualization of the lower urinary tract and enables biopsy of suspicious lesions, particularly bladder tumours, thereby playing both a diagnostic and therapeutic role.

CO-63: PREDICTORS OF SURGICAL INTERVENTION IN PEDIATRIC ACUTE INTUSSUSCEPTION

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Introduction: Acute intussusception is the most common cause of intestinal obstruction in children and requires prompt management. Therapeutic enema reduction is the treatment of choice, while surgical reduction is indicated in cases of enema failure, recurrence, or contraindications.

Methods: We conducted a retrospective study of 233 children diagnosed with acute intussusception between 2016 and 2025. Factors associated with surgical management were assessed using comparative analysis.

Results: The mean age was 29 months. The most frequent presenting symptoms were abdominal pain (96%), crying (73%), vomiting (67%), and rectal bleeding (21%), with a mean symptom duration of 28 hours. A palpable abdominal mass was found in 15 patients. Ultrasound confirmed intussusception, which was ileocecal in 150 cases, ileoileal in 78, and colocolic in 6 cases. The mean length was 32 mm. Spontaneous reduction occurred in 92 patients. Fifteen patients underwent primary surgery because of poor general condition or intra-abdominal effusion, while 126 underwent therapeutic enema, with 29 subsequently requiring surgery because of failed reduction or recurrence. Surgical approaches included a Mac Burney incision in 32 cases, laparoscopy in 9, and midline laparotomy in 2. Rectal bleeding, a palpable abdominal mass, symptom duration exceeding 24 hours, and an intussusception length greater than 3 cm were significantly associated with the need for surgery.

Conclusion: Therapeutic enema remains the first-line treatment for pediatric acute intussusception, regardless of age, with a high success rate. Prolonged symptom duration, rectal bleeding, a palpable abdominal mass, and an intussusception length greater than 3 cm are significant predictors of surgery and may help identify patients at higher risk of enema failure.

CO-64: OPEN VS LAPAROSCOPIC PEDIATRIC INGUINAL HERNIA REPAIR IN A DEVELOPING COUNTRY: A CLINICAL ALGORITHM

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Introduction: Congenital inguinal hernia (CIH) is common condition in children. The optimal surgical approach remains debated especially in developing countries where open repair is still the Gold Standard. This Study aims to compare outcomes of open and laparoscopic CIH repair and develop a clinical decision-making algorithm based on patient and hernia characteristics.

Methods: Monocentric retrospective analytical study conducted at Bechir Hamza Children's Hospital, Tunis, Tunisia, from January 2017 to December 2020. Children aged 1–14 years were divided into open repair (OR) and laparoscopic repair (LR) groups. Demographic and clinical data included sex, age, laterality. Peroperative data included mainly operative duration. The identification and treatment of a contralateral patent processus vaginalis were also noted. Statistical significance was set at $p < 0.05$.

Results: Eighty-four patients were included: 46 underwent LR and 38 OR. Significant differences were found in age at surgery, with LR patients being older (7.5 vs 4.8 years, $p = 0.001$), and in operative time in specific subgroups. For primary unilateral hernias in females, OR was significantly faster than LR (27.45 vs 35.2 minutes, $p = 0.0066$), whereas LR was significantly faster for recurrent hernias (30 vs 49.17 minutes, $p = 0.0163$). Postoperative pain management also differed significantly ($p = 0.0429$), with LR patients requiring less additional NSAID treatment. No significant differences were observed in overall operative time, hernia laterality, hospital stay, or perioperative and postoperative complications.

Conclusion: Surgical management should be individualized. LR is recommended for bilateral and unilateral recurrent hernias. For primary unilateral hernias, OR should be preferred in unstable children with high anesthetic risk or neonates. Otherwise, OR is recommended for girls, whereas LR may be preferred for boys. This algorithm allows the surgical approach to be tailored to patient and hernia characteristics while balancing safety and procedural benefits.

CHIRURGIE UROLOGIQUE

CO-65: VITAMIN D SUPPLEMENTATION FOR IMPROVING SPERM PARAMETERS IN TUNISIAN INFERTILE MEN

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Introduction: Infertility is a growing widespread public health issue. Approximately 50% of infertility cases are partially or totally attributable to male factors. Role of vitamin D in male fertility has recently gained major interest. However, the relationship between vitamin D and semen parameters remains controversial.

Methods: Single-center, prospective, quasi-experimental study, conducted from January 1st to August 31st 2025, among whom patients with low vitamin D levels received oral vitamin D3 supplementation.

Associations and correlations between serum vitamin D levels and semen parameters were assessed, and semen parameters before and after oral supplementation were compared.

Results: Forty (40) patients were included. Semen parameters of count, concentration and motility were associated with serum

vitamin D status. Same parameters were positively correlated with serum vitamin D level. Oral vitamin D3 supplementation for low vitamin D level patients, was associated with a significant improvement in semen parameters of concentration and motility.

Conclusion: It seems there is significant relationship between serum vitamin D level and semen parameters. Our study is a prelude to national large scale clinical trials. Relationship between vitamin D and fertility prognosis is more complex than thought; and nature of the relationship, as well as underlying mechanisms, remain unclear.

CO-66: PROSPECTIVE COMPARISON OF IPSS AND VPSS SCORES IN A TUNISIAN POPULATION

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Introduction: The IPSS is a validated questionnaire used to assess lower urinary tract symptoms, but it is rather impractical. The VPSS visual questionnaire appears to be a practical and time-saving alternative.

Methods: Prospective, correlational study conducted between 1 January 2025 and 30 June 2025 in the Urology Department of the Fattouma Bourguiba University Hospital in Monastir, involving patients presenting with lower urinary tract symptoms. The IPSS and VPSS questionnaires were completed by the patients, and the corresponding scores and sub-scores were calculated. The time taken to complete the questionnaires was measured. A preliminary flow rate measurement was carried out. The chi-square test was used to compare percentages, and the t-test to compare means. Pearson's correlation coefficient was calculated to investigate the correlation between the various parameters assessed. The threshold for statistical significance was set at 0.05.

Results: 89 patients were included in this study. The mean age was 61.1 ± 3.5 years. 72 patients (80.9 per cent) were able to complete the VPSS questionnaire without the doctor's assistance, compared with 45 (50.6 per cent) for the IPSS questionnaire ($p < 0.001$). The mean time taken was 150.4 ± 10.8 seconds for the VPSS score, compared with 210 ± 15.7 seconds for the IPSS score ($p < 0.01$). The study found a statistically significant correlation between: The VPSS and IPSS scores ($r = 0.81$, $p < 0.001$) - The VPSS and IPSS scores on the one hand, and the Qmax on the other ($r = -0.71$ and $r = -0.68$, $p < 0.001$) - VPSS and IPSS scores on the one hand, and the quality of life score on the other ($r = 0.78$ and $r = 0.76$, $p < 0.001$) - The quality of life sub-scores of the IPSS and VPSS questionnaires ($r = 0.89$, $p < 0.001$) - The pollakiuria, nocturia and dysuria sub-scores of the VPSS and IPSS questionnaires ($r = 0.67$, $r = 0.72$ and $r = 0.74$ respectively, $p < 0.001$).

Conclusion: The VPSS questionnaire appears to be a practical alternative to the IPSS in the Tunisian population. However, its usefulness needs to be studied in greater detail.

CO-67: EVALUATION OF NEPHROLITHOMETRIC SCORES IN PREDICTING SUCCESS AND COMPLICATIONS AFTER MINI-PCNL

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Introduction: Mini-percutaneous nephrolithotomy (mini-PCNL) is increasingly used to treat renal calculi. Nephrolithometric scoring systems, including S.T.O.N.E., CROES, Guy's Stone Score (GSS), and s-ReSC, have been developed to predict surgical outcomes, but their comparative performance specifically in mini-PCNL remains poorly defined.

Methods: This prospective study included 124 patients undergoing mini-PCNL (2018–2024). Preoperative CT was used to calculate GSS, S.T.O.N.E., CROES, and s-ReSC scores. SFR was defined as absence of residual fragments >4 mm on postoperative CT; complications were graded using the Clavien-Dindo classification. Score performance was assessed by univariate/multivariate analysis and ROC curve/AUC analysis.

Results: A total of 124 patients (mean age 49.83 ± 16.92 years; mean stone surface area 520.69 ± 419.66 mm²) were included. Overall SFR was 70.16% (87/124), and the complication rate was 13.7% (17/124). Mean scores were: GSS 2.3 ± 0.996 , S.T.O.N.E. 7.42 ± 1.62 , CROES 179.9 ± 43.06 , and s-ReSC 3.27 ± 2.41 . All four scores correlated significantly with SFR on univariate analysis ($p < 0.001$ for GSS and s-ReSC, $p = 0.011$ for S.T.O.N.E., $p = 0.005$ for CROES). On multivariate analysis, only CROES ($p = 0.041$) and S.T.O.N.E. ($p = 0.014$) remained independent predictors of SFR, with AUC values of 0.726 and 0.722, respectively, versus 0.682 (GSS) and 0.671 (s-ReSC). None of the scores predicted postoperative complications.

Conclusion: CROES and S.T.O.N.E. scores reliably predict stone-free status after mini-PCNL, whereas none of the four systems accurately predict complications, highlighting the need for more comprehensive predictive models adapted to mini-PCNL.

CO-68: FACTORS INFLUENCING LENGTH OF HOSPITAL STAY AND EARLY DISCHARGE AFTER MINI-PCNL: EXPERIENCE FROM 124

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Introduction: Mini-percutaneous nephrolithotomy (mini-PCNL) is a widely accepted minimally invasive technique for renal stone management, offering high stone-free rates with reduced morbidity compared with standard PCNL. However, the determinants of hospital length of stay (LoS) and the feasibility of early discharge after mini-PCNL remain incompletely defined. The aim of this work is to identify clinical, surgical, and postoperative factors influencing LoS and to determine independent predictors of early discharge (<48 hours) after mini-PCNL.

Methods: We retrospectively reviewed 124 patients who underwent mini-PCNL in our department between 2018 and 2024. Demographic, comorbidity, stone, operative, and postoperative data were collected. Primary outcomes were total hospital stay and early discharge. Univariate analysis followed by multivariate logistic regression was performed to identify independent predictors of prolonged hospitalization.

Results: Mean operative time was 123.0 ± 32.5 minutes, and mean hospital stay was 3.3 ± 2.6 days. Early discharge was achieved in 51.6% of patients ($n=64$). On multivariate analysis, independent predictors of prolonged LoS were diabetes mellitus (OR 0.50, $p=0.027$), hypertension (OR 0.69, $p=0.045$), stone burden (OR 0.98, $p=0.042$), residual calculi (OR 0.38, $p=0.044$), and nephrostomy tube placement (OR 0.32, $p=0.044$). Urosepsis and significant bleeding, although infrequent, occurred exclusively among patients with prolonged stay. Patients with

smaller stones, no comorbidities, and tubeless procedures were more often discharged within 48 hours.

Conclusion: Hospital stay after mini-PCNL is independently determined by both patient-related (diabetes, hypertension) and procedural (stone burden, residual calculi, nephrostomy tube) factors. These findings support individualized patient selection and enhanced recovery protocols to safely promote early discharge.

CO-69: VALUE OF MULTIPARAMETRIC MRI IN PREDICTING PROSTATE CANCER AGGRESSIVENESS

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Introduction: Prostate cancer is among the most common male cancers worldwide and a major public-health burden in Tunisia. Multiparametric MRI (mpMRI) with PI-RADS scoring is increasingly used before biopsy, but its value for predicting tumor aggressiveness once cancer is confirmed remains incompletely defined.

The aim of this work is to assess the value of mpMRI, together with clinical and biological parameters, in predicting high-grade (ISUP > 3) prostate cancer by correlating radiological findings with targeted-biopsy histology.

Methods: We conducted a retrospective, monocentric study of 110 patients with biopsy-confirmed prostate adenocarcinoma, diagnosed by mpMRI (PI-RADS v2.1) followed by combined systematic and targeted transrectal biopsies, at our department between January 2020 and December 2024. Clinical, biological, and radiological parameters were compared between patients with ISUP 1-2 and ISUP > 3 disease, using univariate analysis followed by multivariate logistic regression.

Results: Mean age was 68.6 ± 7.23 years. Most lesions were classified PI-RADS 5 (60.9%) or PI-RADS 4 (23.6%), and 77 patients (70%) had ISUP > 2 disease. On univariate analysis, suspicious digital rectal examination ($p=0.009$), PSA > 20 ng/mL ($p<0.0001$), PI-RADS 4-5 ($p=0.001$), capsular breach ($p=0.034$), pelvic adenopathy ($p=0.027$), and metastases ($p=0.044$) were all significantly associated with ISUP > 3. None remained an independent predictor on multivariate analysis (all $p>0.25$), likely reflecting the limited sample size and collinearity among radiological parameters.

Conclusion: While mpMRI findings and clinical/biological parameters each correlate individually with tumor aggressiveness, none was independently predictive after adjustment. These findings support a combined PSA–MRI–biopsy approach rather than reliance on any single parameter for risk stratification.

CO-70: DOES LISTENING TO MUSIC DURING CYSTOSCOPY REDUCE PAIN, ANXIETY AND DISSATISFACTION IN PATIENTS?

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Introduction: Cystoscopy is a non-invasive clinical examination procedure widely used in Urology. However, pain and anxiety encountered during cystoscopy are frequent and significant. Pharmacological management means do not completely relieve pain, anxiety and discomfort felt by patients during this procedure. Role of non-pharmacological alternative modalities has recently gained major interest. Music therapy could be one of the most-promising complementary treatments for alleviating pain, anxiety and discomfort experienced by patients undergoing cystoscopy.

Methods: Single-center, randomized-controlled, single-blinded trial, conducted from January 1st 2026 to June 30th 2026. Well-informed and consenting patients >18 years old were included. Patients with contraindications to lidocaine or urinary tract infection were excluded. Patients undergoing flexible cystoscopy for the first time were randomized into two groups: Group I: Without music - Group II: Wearing a headset with the music of their choice. All cystoscopies were performed under local anesthesia (Lidocaine jelly). We measured anxiety levels by means of the State-Trait Anxiety Inventory, and pain/dissatisfaction by means of Visual Analog Scale (VAS). Groups were compared using t-test (significance was assessed for $p < 0.05$).

Results: Sixty (60) patients were included: 30 patients in each group. Patients in groups I and II had similar mean ages (61.3 and 59.8 years, respectively; $p=0.877$). Both groups were similar with regard to reasons for undergoing cystoscopy ($p=0.782$). Duration of cystoscopy was statistically similar in both groups (6.82 vs. 6.41 minutes, respectively, $p=0.602$). Pain (5.7 vs. 2.4, respectively), anxiety (56.3 vs. 37.9, respectively) and dissatisfaction (6.3 vs 3.1, respectively) mean scores were significantly higher in group I ($p < 0.001$).

Conclusion: Music therapy, as a complementary non-pharmacological pain and anxiety management means during cystoscopy, seems to be safe, affordable and effective. Our **Results** should be reinforced by large scale multicentric studies, though.

CO-71: DOES RADICAL PROSTATECTOMY SIGNIFICANTLY IMPACT QUALITY OF LIFE OF TUNISIAN MALE PATIENTS?

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Introduction: Prostate cancer is a public-health issue. Radical Prostatectomy (RP) is widely used for localized prostate cancer. However, international studies show that this surgery is associated with a significant decrease in Quality of Life (QoL), as it affects general and sexual well-being of patients. This impact hasn't been studied in the tunisian context yet.

Methods: Prospective, single-center, descriptive study, conducted from January 1st 2020 and June 30th 2026, including well-informed and consenting patients that underwent RP for localized prostate cancer (adenocarcinoma). It excluded patients that underwent cystoprostatectomy, patients unavailable for follow-up and patients unable to answer the questionnaires used for assessment. QoL was assessed by means of of Short-Form Health Survey (SF-36), and sexual function by means of international Index of Erectile Function (IIEF-15) (arabic validated versions). Patients were followed-up for one year after surgery. Measurements were done one day before, and 12 months post-surgery, and compared using non-parametric tests (Threshold $p < 0.05$).

Results: Forty (40) patients were included. All patients had (at least) a sexual partner, whether married or not. Mean age was

about 72.3 ± 5.3 years. Assessment of general health (using SF-36) showed that patients' functional capacity was in average normal to subnormal before surgery and 12 months post-surgery, with no significant variation between first (baseline) and second (12 month) measurement.

Assessment of sexual function showed that patient's sexual capacity was subnormal before and after surgery, with a statistically significant decrease in all items of sexual function between first and second measurement.

Conclusion: It seems that RP significantly impacts general health and sexual function of tunisian male patients with localized prostate cancer. Adding to that, postoperative sexual dysfunction seems to be progressive in time. A comprehensive approach, taking into consideration physical, emotional, psychological and sexual issues of tunisian patients undergoing RP, is crucial for improving their overall well-being.

CO-72: DEVELOPMENT OF A NOVEL SCORE FOR PREDICTING INFECTIOUS COMPLICATIONS AFTER PCNL

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Introduction: Infectious complications remain a significant concern after percutaneous nephrolithotomy (PCNL). This study aimed to develop and internally validate a simple clinical score for predicting infectious complications following PCNL.

Methods: We retrospectively analyzed a PCNL database comprising 331 patients. The primary outcome was a composite infectious endpoint including postoperative fever, perioperative sepsis, urosepsis, septic shock, or puncture-site infection. Patients with insufficient information to determine the composite endpoint were excluded. Candidate predictors were selected according to clinical relevance and assessed using penalized logistic regression. A parsimonious multivariable logistic model was subsequently transformed into an integer-based score. Model performance was evaluated using discrimination, calibration-related measures, and five-fold cross-validation.

Results: Overall, 267 patients had an evaluable infectious outcome, of whom 53 (19.9%) developed a composite infectious complication. These included 53 cases of postoperative fever, seven cases of urosepsis, two cases of perioperative sepsis, and two puncture-site infections; no septic shock was recorded. The final model retained three predictors: operative time greater than 120 minutes (odds ratio [OR] 6.65), staghorn calculi (OR 3.80), and preoperative pyuria $\geq 10,000$ leukocytes/mm³ (OR 2.23). Based on the regression coefficients, three points were assigned for an operative time >120 minutes, two points for a staghorn calculus, and one point for preoperative pyuria, producing a score ranging from 0 to 6. The observed infectious complication rates were 4.4% in the low-risk group (0–1 points), 18.9% in the intermediate-risk group (2–3 points), and 51.7% in the high-risk group (4–6 points). The integer score achieved an apparent area under the receiver operating characteristic curve of 0.80 (95% CI 0.73–0.87), while the corresponding parsimonious model yielded a five-fold cross-validated AUC of 0.77.

Conclusion: A simple three-item score based on operative duration, staghorn stone morphology, and preoperative pyuria showed promising discrimination for infectious complications after PCNL. This score could facilitate early risk stratification

and guide postoperative surveillance. External validation in a larger independent cohort is required before routine clinical implementation.

CO-73: SAFETY AND EFFICACY OF PERCUTANEOUS NEPHROLITHOTOMY IN PATIENTS WITH SOLITARY OR ANOMALOUS KIDNEYS

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Introduction: Percutaneous nephrolithotomy (PCNL) in patients with a solitary or anatomically anomalous kidney may be technically challenging because of altered renal anatomy and the need to preserve renal function. This study aimed to compare the efficacy and safety of PCNL between patients with solitary or anomalous kidneys and those with anatomically normal paired kidneys.

Methods: We retrospectively analyzed patients who underwent PCNL and had available information regarding renal anatomy. Patients were divided into two groups: anatomically normal paired kidneys and solitary or anomalous kidneys. The latter group included solitary, malrotated, duplex-system kidneys and kidneys associated with ureteropelvic junction obstruction. The primary outcome was stone-free status. Secondary outcomes included operative duration, residual stones, secondary treatment, infectious and hemorrhagic complications, urinary leakage, Clavien–Dindo complications, and length of hospital stay. Continuous variables were compared using the Mann–Whitney U test and categorical variables using Fisher's exact test.

Results: Among 319 eligible patients, 301 had anatomically normal paired kidneys and 18 had a solitary or anomalous kidney, including 12 solitary kidneys, one malrotated kidney, two duplex systems, and three kidneys with ureteropelvic junction obstruction. Patients with solitary or anomalous kidneys had higher preoperative serum creatinine levels (median 99 vs 81 $\mu\text{mol/L}$; $p=0.003$) and longer operative times (median 135 vs 105 minutes; $p=0.010$). Stone-free status was achieved in 9 of 17 evaluable patients (52.9%) in the solitary/anomalous group and 160 of 297 patients (53.9%) in the normal-kidney group ($p=1.000$). Composite infectious complications occurred in 1 of 16 (6.3%) and 52 of 297 (17.5%) evaluable patients, respectively ($p=0.325$). Composite hemorrhagic complications occurred in 1 of 16 (6.3%) versus 21 of 296 (7.1%; $p=1.000$). Clavien–Dindo grade $\geq \text{II}$ complications occurred in 12.5% versus 20.9% ($p=0.539$), while grade $\geq \text{III}$ complications occurred in 6.3% versus 4.7% ($p=0.554$). Median hospital stay was 2.5 days in the solitary/anomalous group and 3 days in the normal-kidney group ($p=0.122$).

Conclusion: In this exploratory cohort, PCNL in patients with solitary or anomalous kidneys was associated with a longer operative duration but showed comparable observed stone-free and complication rates to PCNL performed in anatomically normal paired kidneys. These findings support the feasibility of PCNL in selected patients with complex renal anatomy. However, the small and heterogeneous subgroup limits statistical power, and larger multicenter studies are needed to confirm safety and identify anatomy-specific predictors of outcome.

CO-74: TUBELESS VERSUS CONVENTIONAL DRAINAGE AFTER PERCUTANEOUS NEPHROLITHOTOMY: A COMPARATIVE COHORT STUDY

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Introduction: Tubeless percutaneous nephrolithotomy (PCNL), defined by the omission of a nephrostomy tube, may reduce postoperative discomfort and hospital stay in appropriately selected patients. This study compared the perioperative outcomes of tubeless PCNL with those of conventional nephrostomy drainage.

Methods: We retrospectively analyzed patients undergoing PCNL with available information regarding drainage at the end of the procedure. Tubeless PCNL was defined as the absence of nephrostomy drainage, either with an internal double-J stent or without any ureteral drainage. Conventional drainage consisted of nephrostomy placement with ureteral drainage. The primary outcome was length of hospital stay. Secondary outcomes included stone-free status, infectious and hemorrhagic complications, urinary leakage, transfusion, secondary stone treatment, and Clavien–Dindo complications. Continuous variables were compared using the Mann–Whitney U test and categorical variables using Fisher's exact test.

Results: Among 310 eligible procedures, 15 were tubeless and 295 received conventional nephrostomy drainage. The tubeless group included six totally tubeless procedures and nine procedures with double-J stenting alone. Patients selected for tubeless PCNL had smaller stones (median 26 vs 33 mm; $p=0.017$) and a lower prevalence of complex stones (30.0% vs 68.3%; $p=0.033$). Median operative duration was 100 minutes in the tubeless group and 110 minutes in the conventional group ($p=0.106$). The stone-free rate was comparable between the groups (53.3% vs 54.2%; $p=1.000$). Median hospital stay was significantly shorter after tubeless PCNL (2 vs 3 days; $p=0.015$). No infectious complication was observed among 15 evaluable tubeless procedures, compared with 53 among 250 conventionally drained procedures (0% vs 21.2%; $p=0.047$). No hemorrhagic complication, urinary leakage, postoperative transfusion, or Clavien–Dindo grade $\geq$ II complication was recorded in the tubeless group. However, the need for secondary stone treatment was similar between groups (40.0% vs 36.7%; $p=0.790$).

Conclusion: In this retrospective cohort, tubeless PCNL was associated with a shorter hospital stay without an observed reduction in stone-free status. No major safety signal was identified among selected tubeless procedures. Nevertheless, patients undergoing tubeless PCNL had smaller and less complex stones, indicating substantial selection bias. Given the small tubeless group, these findings should be interpreted as exploratory and require confirmation in larger prospective or propensity-adjusted studies.

CO-75: DISCORDANCE BETWEEN PI-RADS 5 LESIONS AND ISUP GRADE IN PATIENTS WITH PROSTATE CANCER

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Introduction: PI-RADS 5 lesions are considered highly suspicious for clinically significant prostate cancer. However, a substantial proportion may correspond to low-grade tumors on biopsy. This study aimed to determine the prevalence of PI-RADS–histology discordance and identify factors associated with high-grade cancer among patients with PI-RADS 5 lesions.

Methods: We conducted a retrospective, single-center study including patients who underwent prebiopsy multiparametric prostate MRI followed by systematic and targeted transrectal biopsies between January 2020 and December 2024. Patients with PI-RADS 5 lesions were selected. Discordance was defined as a PI-RADS 5 lesion associated with ISUP grade group 1–2, while concordant high-grade disease was defined as ISUP grade group $\geq$ 3. Clinical, radiological, and biopsy-related characteristics were compared between groups using Fisher's exact and Mann–Whitney U tests.

Results: Among 69 patients with PI-RADS 5 lesions, 43 (62.3%) had ISUP grade group 1–2, representing radiological–histological discordance, whereas 26 (37.7%) had ISUP grade group $\geq$ 3. High-grade disease was significantly associated with pelvic lymphadenopathy (53.8% vs 18.6%; $p=0.003$), metastatic disease at diagnosis (53.8% vs 14.0%; $p<0.001$), and histological invasion of periprostatic adipose tissue (46.2% vs 20.9%; $p=0.034$). The median percentage of tumor involvement was higher in the high-grade group in both the left lobe (60% vs 24%; $p=0.040$) and right lobe (77.5% vs 15%; $p<0.001$). MRI-suspected extracapsular extension was more frequent in patients with ISUP $\geq$ 3, although the difference did not reach statistical significance (84.6% vs 60.5%; $p=0.057$).

Conclusion: A substantial proportion of PI-RADS 5 lesions were associated with low-grade prostate cancer, highlighting the imperfect correlation between MRI suspicion and histological aggressiveness. Pelvic lymphadenopathy, metastatic disease, periprostatic fat invasion, and greater bilateral tumor burden were associated with high-grade cancer. PI-RADS 5 findings should therefore be interpreted alongside clinical, staging, and biopsy tumor-burden parameters.

CO-76: INTRACAVITARY TRANEXAMIC ACID DURING PERCUTANEOUS NEPHROLITHOTOMY: A RANDOMIZED, PLACEBO-CONTROLLED

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Introduction: Bleeding is a frequent complication of percutaneous nephrolithotomy (PCNL). It can obscure the endoscopic field, prolong surgery, and increase the transfusion rate. Intravenous tranexamic acid reduces blood loss but carries systemic risk. Local intracavitary delivery could control bleeding at the surgical site with less systemic exposure.

Aim. To assess whether intracavitary tranexamic acid reduces perioperative bleeding compared with placebo in patients undergoing PCNL for staghorn stones.

Methods: We conducted a prospective randomized trial of 60 patients with staghorn calculi, allocated 1:1 into two groups of 30. Group 1 received 1 g of tranexamic acid in 500 mL of normal saline, instilled through the access sheath once placed. Group 2 received 500 mL of 0.9% saline (placebo). Endpoints were blood loss, endoscopic vision, operative time, irrigation

volume, haemoglobin and haematocrit change, transfusion, and complications.

Results: Preoperative characteristics were comparable. The haemoglobin drop was smaller in Group 1 (-1.15 vs -2.45 g/dL; $p < 0.05$). Blood loss was lower in Group 1 (145 vs 289 mL; $p < 0.05$). Two patients in Group 1 required transfusion versus five in Group 2 ($p < 0.05$). Irrigation volume and haematocrit drop were lower in Group 1 but not significant. Hospital stay and stone-free rate were similar. No adverse event related to tranexamic acid occurred.

Conclusion: Intracavitary tranexamic acid during PCNL reduced blood loss, the haemoglobin drop, and transfusion, with no observed adverse effect. It offers a local option that limits systemic exposure and warrants larger trials.

CO-77: THE MODIFIED 5-ITEM FRAILTY INDEX PREDICTS PERIOPERATIVE RISK AFTER PERCUTANEOUS NEPHROLITHOTOMY

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Introduction: The modified 5-item frailty index is a relatively new tool to assess the post-operative complication risks. In urology, there is limited literature on the impact of frailty on percutaneous nephrolithotomy (PCNL) outcomes. We aimed to compare the predictive value of the modified 5-item frailty index (mFI-5) to identify high risk patients prior to PCNL.

Methods: A database of patients undergoing PCNL, between 2015 and 2022, was analyzed. Patient frailty was assessed using the mFI-5 index. The mFI-5 index was calculated based on the presence of the five co-morbidities: congestive heart failure within 30 days prior to surgery, diabetes mellitus, chronic obstructive pulmonary disease, partially dependent or totally dependent functional health status at time of surgery, and hypertension requiring medication. Patients were grouped as not frail (mFI-5 = 0), intermediate (mFI-5 = 1), and severely frail (mFI-5 ≥ 2). Primary outcomes were 30-day postoperative complications. Secondary outcomes were hospitalization: total hospital length of stay, reoperation, and unplanned readmission.

Results: From a total of 320 PCNL patients included for analysis, 54.06% ($n = 173$) were not frail, 17.81% ($n = 57$) were intermediate, and 28.12% ($n = 90$) were severely frail. Frail patients were likely to be older ($p = 0.002$) and have a higher American Society of Anesthesiologists score ($p = 0.001$), chronic kidney disease ($p < 0.001$). Patients of intermediate or severe frailty were more likely to exhibit postoperative sepsis ($p = 0.042$), significant blood loss ($p = 0.036$) and require intensive care units admissions ($p = 0.0015$). Frail patients had a longer hospital length of stay ($p < 0.001$) and tended to require reoperation ($p = 0.001$), and unplanned readmission ($p = 0.02$).

Conclusion: Frailty assessment appears useful in stratifying those at risk of extended hospitalization, septic and hemorrhagic complications, readmission, or reoperation after PCNL. Preoperative assessment of frailty phenotype may give insight into treatment decisions and assist surgeons in counselling patients on expected course and hospital stay following PCNL.

CO-78: HYPERTROPHIE BENIGNE DE LA PROSTATE ET TUMEUR VESICALE N'INFILTRANT PAS LE MUSCLE : LA MYTHE OU RÉAL

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Introduction: L'association d'une hyperplasie bénigne de la prostate à une tumeur vésicale n'infiltrant pas le muscle (TVNIM) est de plus en plus fréquente.

L'Objectif est d'étudier le risque spécifique d'implantation tumorale prostatique lors de la résection endoscopique (RE) en un seul temps.

Methods: Etude rétrospective à l'unité d'Urologie de l'Hôpital des FSI du Février 2007 et Janvier 2021 et ayant eu une RE simultanée d'une hypertrophie de la prostate et d'une TVNIM. 38 patients ont ainsi été colligés et constituent le groupe d'étude. Un groupe témoin par tirage au sort de 31 patients ayant eu RE seule de TVNIM. Les deux groupes ont été comparés: test de Chi-deux, de Fisher test de U de Mann-Whitney.

Results: L'âge moyen est 71 ans (56- 90 ans). La taille de la prostate était petite chez 45% des cas. A La cystoscopie 72% des patients avaient une tumeur vésicale unique. La RE de TV précédait la résection de la prostate chez 70% des cas. 85,4% des patients avaient une TVNIM à risque intermédiaire. Une BCG thérapie post-opératoire est réalisée chez 80 %. Le recul moyen est de 28 mois (2 mois-09 ans). 17 patients avaient présenté à une ou plusieurs récides tumorales vésicales avec un délai moyen de 18 mois (5 mois à 5 ans). Deux (2) patients ont présenté une récide tumorale au niveau de la loge de résection prostatique.

Conclusion: La résection endoscopique simultanée d'une HBP et une TVNIM peut être réalisée sans augmentation significative du risque de récide urothéliale prostatique.

CO-79: PLACE DE L'ACIDE ZOLÉDRONIQUE DANS LE TRAITEMENT DU CANCER DE LA PROSTATE MÉTASTATIQUE CHEZ LE SUJET

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Introduction: Le premier objectif du traitement du cancer de la prostate métastatique chez le sujet âgé est l'amélioration de la qualité de vie tout en préservant son autonomie. A cet effet, le traitement des métastases osseuses vise à améliorer les douleurs souvent intenses, traiter éventuel trouble métabolique et surtout retarder autant que possible les événements osseux. L'objectif de notre travail est d'analyser l'impact du traitement par l'Acide Zolédronique sur la qualité de vie des patients ayant des métastases osseuses du cancer de la prostate, et d'étayer les principaux facteurs prédictifs du résultat du traitement.

Methods: Il s'agit d'une étude rétrospective transversale descriptive et analytique, incluant les malades âgés de plus de 65 ans et ayant un cancer de la prostate au stade M1b, traités par l'Acide Zolédronique (médicament pris en charge par la CNAM) au service d'Urologie de l'Hôpital des FSI La Marsa, durant la période de Janvier 2006 jusqu'à Décembre 2021. Les critères de jugement principal étaient : la douleur osseuse évaluée par le score d'EVA, le recours aux antalgiques morphiniques, qualité de Vie, et ceci avant le traitement et à 6 mois et 12 mois du traitement par l'Acide Zolédronique. La saisie et l'analyse des données statistiques ont été faites par le logiciel SPSS 16.0.

Results: Nous avons recensé 23 patients ayant un cancer de la prostate de novo au stade T1b, classé oligométastatique dans 14 cas et Polymétastatique dans 9 cas. L'âge moyen était de 71 ans (68-89 ans), le diabète était mentionné chez 21 patients. Le

taux de PSA moyen été de 75 ng/ml (35-1400 ng/ml) , le score de Gleason moyen été 7.1(6-10).Tous nos Patients ont eu une hormonothérapie, au moins six mois précédant le traitement par l'Acide Zoledronique. Au terme de notre étude analytique, nous avons objectivé une baisse statistiquement significative de la douleur estimée par l'EVA moyen à trois mois et six mois du traitement dans les deux groupes, par rapport à la valeur moyenne de départ. Le recours aux antalgiques morphiniques était statiquement plus marquée dans le Groupe II versus Groupe I: 15,6 mg (15-60 mg) versus 5,9 mg (5-25mg) P : 0.001. La qualité de vie était comparable entre les deux groupes et ceci à 3 et 6 et 9 mois du traitement par l'Acide Zoledronique. La médiane de survie dans n notre série était de 9,8 mois (4-21 mois). Une Hypercalcémie été notée chez 7 malades dont 4 ont normalisé leurs taux après trois mois du traitement.

Conclusion: Le traitement par l'Acide Zoledronique des métastases osseuses du cancer de la prostate pourrait avoir un effet antalgique plus marqué en cas de maladie oligo-métastatique chez le sujet âgé, avec des effets secondaires souvent mineurs. Ceci devrait être confirmé par des études de grande taille et contrôlée.

CO-80: IMMUNOTHÉRAPIE ENDOVÉSICALE DANS LE TRAITEMENT DES TVNIM DE LA VESSIE

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Introduction: Les tumeurs urothéliales n'infiltrant pas le muscle vésical (TVNIM) nécessitent souvent un traitement conservateur basé sur l'immunothérapie endovésicale en complément au traitement endoscopique. La morbidité du traitement reste non négligeable, pouvant amener à changer d'alternative thérapeutique.

L'objectif de notre travail est d'analyser les résultats à long terme du traitement par BCG thérapie endovésicale des TVNIM du sujet âgé.

Methods: Entre Avril 2002 et Juillet 2021, 29 patients (23 homme et 6 femme) dont l'âge est de 69 ans (67-89 ans) porteurs de TVNIM ont été inclus dans notre étude. Tous nos patients ont eu une résection endoscopique de tumeur vésicale pour confirmer le diagnostic, suivi de BCG thérapie endovésicale : Six instillations hebdomadaires plus six instillations mensuelles.

Nous avons recensés les effets secondaires de la BCG thérapie, et aussi le taux de récurrence et ou la progression chez nos malades.

Results: La période de suivi médiane était de 57,5 mois (52-116 mois). Les TVNIM était classée Faible risque : 4 patients, Risque intermédiaire : 19 patients, Haut risque 6 patients. Les taux de récurrence étaient de 35,7% tous stade et garde confondus. Le taux global de réponse complète était de 58%. Le taux de survie sans progression à 5 ans était de 77,2%. Plusieurs facteurs, comme l'âge (>70 ou <70ans), le genre, les antécédents de résection endoscopique et l'association aux CIS ont été examinés par une analyse multivariée pour prédire la progression. Aucun d'entre eux n'était un facteur pronostique indépendant. Les symptômes d'irritation vésicale étaient les principaux effets indésirables de la BCG thérapie. Un traitement chirurgical radical basé sur la cystectomie était réalisé chez 3 hommes.

Conclusion: La BCG thérapie endovésicale pour TVNIM du sujet âgé ne semble pas associée à une morbidité supplémentaire chez le sujet âgé, à l'opposé du pronostic carcinologique qui semble être péjoratif chez cette population.

CO-81: DYSFONCTION SEXUELLE DU DRAINAGE URÉTÉRAL DE L'HOMME ÂGÉ : ETUDE ANALYTIQUE, PROSPECTIVE CONTRÔLÉE

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Introduction: La mise en place des prothèses endourétrales autostatiques type « JJ » représente l'une des interventions les plus fréquentes en urologie. Cependant, ces sondes sont associées à une morbidité non négligeable, qui pourrait altérer la qualité de vie des patients notamment la sexualité ; l'étude de l'impact sexuel de ces prothèses endo urétérales chez le sujet âgé est très peu étudiée dans la littérature. A cet effet l'objectif de notre travail est d'évaluer la morbidité sexuelle de la montée de sonde JJ chez le sujet âgé, et analyser les facteurs prédictifs du comportement sexuel du sujet âgé.

Methods: Nous avons menée une étude prospective randomisée aux services d'urologie de l'Hôpital des forces de sécurité intérieure de La Marsa, et de l'Hôpital militaire principal d'instruction de Tunis, sur une période de 21 mois, allant du 1er décembre 2019 au 30 Septembre 2021. Le recrutement a porté sur les patients âgés de plus de 65 ans sexuellement actifs, qui ont eu une urétéroscopie (URS) simple pour calcul de l'uretère avec mise en place d'une endoprothèse urétérale auto statique type JJ, ces patients ont été randomisés de façon aléatoire en deux groupes : Groupe I ayant eu une URS avec montée de sonde JJ, Groupe II ayant eu une URS sans mise en place d'une sonde JJ. L'approbation de comité d'éthique de l'hôpital avait été obtenue et tous les

Results: Nous avons inclus 52 patients âgés de plus de 65 ans ayant eu une URS simple pour calcul de l'uretère ; le GI comportant 25 patients, le GII 27 patients. L'âge moyen de la population était de 68,91 ± 2 ans, avec des extrêmes de 66 et de 87 ans. Les deux groupes étaient statistiquement comparables en pré opératoire concernant l'âge moyen, la morbidité, la taille et localisation de calcul, le genre ratio, le score de l'IPSS préopératoire le score de Beck et le score d'IEEF-5.

Nous avons objectivé une diminution statistiquement significative du score IIEF-total moyen dans le groupe I à J-30 et J-60 post opératoire, comparativement au score d'IIEF-total préopératoire : 56,5±2,1(préop) vs 44,56±3,5(J-30) pour le GI vs 45,24±3,94(J-60) pour le GII(p<0,001). Bien que nous avons constaté une diminution des scores des différents domaines de l'IIEF à J-30 et à J-60 postopératoire, cette altération n'était statistiquement significative que pour le domaine de la FE (p=0,000) et le domaine de la Satisfaction Globale lors du rapport sexuel(p<0,001) pour le groupe I. A l'étude analytique Nous avons Objectivé une corrélation négative et qui est statistiquement significative entre le score de l'IPSS et la diminution du score du Domaine le FE (Rho sperman : -0,536, p=0,001) ; Cette corrélation négative est retrouvée aussi à J-60 postop. Les douleurs lombaires rapportées par les malades du groupe I, étaient un élément prédictifs de l'altération de la fonction érectile avec une corrélation négative.

Conclusion: En se référant à notre étude, qui à notre connaissance la première en Uro-gériatrie, La mise en place des sondes « JJ » chez le sujet âgé est pourvoyeuse de dysfonction sexuelle qui pourrait persister en postopératoire. Cette constatation nécessite d'autres études contrôlées de plus grande envergure pour mieux évaluer ce retentissement sexuel.

CO-82: HOW TO PREDICT FAILURE OF SURGICAL TREATMENT OF VESICOVAGINAL FISTULAS?

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Introduction: Vesico-vaginal fistula (VVF) is one of the most important diseases related to quality of life in women's diseases and postoperative complications.

We aimed to identify preoperative predictive factors of fistula repair failure and to develop a predictive model for this disorder.

Methods: The data from patients who underwent VVF repair from January 2010 and December 2024 were recorded and analyzed. The therapeutic **Results** were assessed after a follow-up of at least six months. A successful VVF repair was defined as: closed VVF as noted on visual inspection of both the bladder and the vagina, no subjective complaints of vaginal leakage, no evidence of leakage during Valsalva and cough from the vaginal closure area using a half-speculum. Variables associated with fistula repair failure in the univariate analysis were included in a multivariate model using binary logistic regression to determine the independent factors of this disorder. All statistical analyses were performed using SPSS, and significance was set at 0.05%.

Results: One hundred and two patients were identified. The median age of patients was 49 (interquartile range: 42 – 55) years. Failure of surgical treatment of VVF has been reported in 32 (31.3%) cases. Patients with failed surgical treatment had the higher size of fistula ($p = 0.01$), supratrigonal fistula ($p = 0.023$) and vaginal fibrosis ($p = 0.001$). On multivariate analysis, vaginal fibrosis (Adjusted OR = 5.2; 95% CI = 2.88 – 14.54; $p = 0.01$) and supratrigonal VVF (Adjusted OR = 4.7; 95% CI = 3.18 – 8.86; $p = 0.001$) were independent factors of fistula repair failure. These two predictors were used to calculate the probability of combined success given by the following formula: $e^b/(1+e^b)$, where $b = -0.754 + 1.2*(\text{for the vaginal fibrosis}) + 1.3*(\text{for a supratrigonal VVF})$. The model had a sensitivity of 56% and a specificity of 88%.

Conclusion: Treatment failure was, in our series, correlated with the quality of the vaginal tissue and the seat of the fistula. This study demonstrated that vaginal fibrosis and supratrigonal fistula location are independent risk factors for failure of surgical treatment of VVF.

CO-83: IMPACT OF COMPLETE TRANSURETHRAL BLADDER TUMOR RESECTION ON RADICAL CYSTECTOMY OUTCOMES

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Introduction: The prognostic significance of complete transurethral resection of bladder tumor (c-TURBT) before radical cystectomy (RC) for muscle-invasive bladder cancer (MIBC) remains controversial. This study aimed to evaluate the impact of c-TURBT on pathological and oncological outcomes in patients undergoing RC.

Methods: A retrospective multicenter cohort study included consecutive patients who underwent RC with curative intent for MIBC between 2016 and 2024. The completeness of the last TURBT before RC was classified according to the operating surgeon's intraoperative assessment as complete or incomplete. Multivariable logistic regression analyses were performed to

assess the association between incomplete TURBT and adverse pathological features at RC. Recurrence-free survival (RFS) and overall survival (OS) were estimated using the Kaplan–Meier method and compared using the log-rank test.

Results: A total of 436 patients were included (mean age 71 ± 13 years), of whom 240 (55%) underwent c-TURBT and 196 (45%) had incomplete TURBT. Patients with incomplete TURBT were significantly older and more frequently presented with hydronephrosis, preoperative renal drainage, larger tumors, and greater intraoperative blood loss. On multivariable analysis, incomplete TURBT independently predicted advanced pathological stage (pT3–T4; OR 3.20, 95% CI 2.05–4.99; $p < 0.001$), positive soft tissue surgical margins (OR 2.15, 95% CI 1.30–3.56; $p = 0.005$), and lymph node invasion (OR 1.78, 95% CI 1.10–2.83; $p = 0.015$). After a median follow-up of 3.2 years, c-TURBT was associated with significantly improved RFS (92% vs. 74%; log-rank $p = 0.003$), whereas no significant difference in OS was observed between the groups (85% vs. 79%; log-rank $p = 0.36$).

Conclusion: Complete TURBT before radical cystectomy is associated with more favorable pathological outcomes and improved recurrence-free survival but does not significantly improve overall survival. These findings support c-TURBT as an important component of preoperative management to optimize local disease control and pathological staging before definitive surgery.

CO-84: PREGABALIN FOR CATHETER-RELATED BLADDER DISCOMFORT AFTER TRANSURETHRAL BLADDER TUMOR RESECTION

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Introduction: Catheter-related bladder discomfort (CRBD) is a major cause of postoperative morbidity following urological procedures.

The aim of this study was to determine the effect of 150 mg oral pregabalin pretreatment on postoperative CRBD.

Methods: This prospective, randomized, study was conducted from July 2023 through September 2023. It included patients who were scheduled for elective transurethral resection of bladder tumor (TURBT) under spinal anaesthesia. Patients with renal failure or seizure disorders, on treatment with sustained-release opioids, antidepressants or antipsychotics, allergic to pregabalin, and unwilling to give consent were excluded. Patients were randomly allocated to receive either 150 mg of oral pregabalin (group 1) or placebo (group 2) two hours before the operation. CRBD was graded as none, mild, moderate, and severe. The incidence and severity of CRBD were then evaluated 1, 2, 4, 6 and 12 hours after the patient arrived in the post-anesthesia care unit.

Results: A total of 78 patients were included in the study (39 patients in each group). The incidence of moderate and severe CRBD was significantly less in the group 1 compared with the control group at 1, 2, 4 and 6 hours (21.9% vs. 65.9%, $p = 0.019$; 10.6% vs. 31.9% $p = 0.012$; 2.1% vs. 21.3%, $p = 0.004$; 2.6% vs. 20.9%, $p = 0.006$ respectively). The group of placebo reported significantly higher use of analgesic drug during the 24 hours postoperative period. None of the patients who received 150mg oral pregabalin experienced an adverse event.

Conclusion: A 150 mg oral pregabalin is safe and effective in decreasing the incidence and severity of CRBD in patients undergoing TURBT.

CO-85: A SIMPLE PREDICTIVE SCORE FOR URINARY FISTULA IN RENAL HYDATID CYSTS

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Introduction: Hydatid cyst is a major health problem in developing countries. The kidney is in third position of organs affected by hydatid cyst. One of the complications of renal hydatid cyst is a urinary fistula.

The purpose of this study is to identify preoperative predictive factors of urinary fistula in renal hydatid cyst and to develop a scoring system for this disorder.

Methods: We retrospectively analyzed all patients operated for renal hydatid cysts between January 2000 and December 2020. We divided our patients into two groups according to whether or not the renal hydatid cysts opened in the urinary tract. Predictive factors of the presence of a urinary fistula have been studied to obtain a simple score to predict the presence of a urinary fistula. Differences were considered significant if $p < 0.05$.

Results: Urinary fistula was detected in 33 of 96 patients. Univariate analyses showed significant differences in patient age, cyst size, location, hydaturia, eosinophil count, and platelet count between patients with and without urinary fistula. In multivariate analyses, hydaturia ($p < 0.005$), eosinophil count $>500/\text{mm}^3$, ($p = 0.01$), cyst diameter $>5 \text{ cm}$ ($p = 0.02$), and upper or lower renal pole location ($p = 0.003$) were significant and independent predictors of urinary fistula. A score was developed to predict the opening of the cyst in the urinary tract. The total score varies between 0 and 15. The resulting area under the receiver operator characteristic curve was 0.798 (95% CI, 0.726-0.866; $p = 0.023$). At a cutoff point ≥ 8 , the specificity achieved was 100%.

Conclusion: Preoperative detection and management of urinary fistula are important issues in the treatment of renal hydatid cyst. Developing a scoring system based on routinely measured laboratory and radiologic factors will help the clinician to manage patients with renal hydatid cysts. External studies are needed to validate this new scoring system in routine clinical practice.

CHIRURGIE VASCULAIRE PÉRIPHÉRIQUE

CO-86: SMOKING AND DYSLIPIDEMIA: KEY DRIVERS OF FEMORAL ARTERIOVENOUS GRAFT THROMBOSIS

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Introduction: Exhaustion of upper limb venous capital may necessitate prosthetic femoral arteriovenous grafts (FAVGs) in hemodialysis patients. Thrombosis remains the primary complication limiting their patency. This study assesses the impact of cardiovascular risk factors, particularly smoking and dyslipidemia, on FAVG patency.

Methods: This single-center retrospective longitudinal study

was conducted at the Military Hospital of Tunis during a 12-year period and included consecutive patients undergoing FAVGs. The endpoints were early (<30 days) and late thrombosis. The impact of age, smoking, diabetes, hypertension (HT), dyslipidemia, and obesity on these endpoints was analyzed using p values.

Results: Among 42 patients who received 48 FAVGs (n), mean age was 63 years, and male-to-female ratio was 1.2. Dyslipidemia was present in 27% ($n = 13$) and smoking in 36% of patients ($n = 17$). Early thrombosis occurred in 4% of grafts ($n = 2$) and late thrombosis in 49% ($n = 29$). Dyslipidemia and smoking were the main factors associated with early thrombosis, without statistical significance, with $p = 0.15$ and $p = 0.21$, respectively, while dyslipidemia remained the predominant factor in late thrombosis ($p=0.28$). Other factors (age, diabetes, and HT) showed no notable impact on graft occlusion.

Conclusion: Although not statistically significant in this cohort, smoking and dyslipidemia appear to be clinical determinants of FAVG thrombotic failure. Aggressive management of these risk factors is essential to optimize longevity of these 'last-line' vascular access options.

CO-87: PSEUDOANEURYSMS OF FEMORAL GRAFTS IN HEMODIALYSIS: A MANAGEABLE THREAT

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Introduction: Femoral arteriovenous grafts (FAVGs) for hemodialysis access face mechanical and infection risks. Pseudoaneurysms (PAs) are a serious issue that can damage the access. This study aimed to assess their rate and repair techniques.

Methods: This single-center retrospective observational study included consecutive hemodialysis patients who underwent FAVGs at the Military Hospital of Tunis over 12 years. The primary endpoint was the occurrence of PA, with diagnosis confirmed by clinical examination and duplex ultrasonography. The secondary endpoint was the repair technique used.

Results: Forty eight FAVGs were done on 42 patients. The study population mean age was 63 years and male-to-female ratio was 1.2. PA occurred in 17% of FAVGs ($n = 8$). Two were anastomotic and required prosthetic removal because reconstruction was not feasible in the setting of local infection. The remaining six occurred at puncture sites and were managed by graft excision with prosthetic interposition, allowing access preservation. Obesity was associated with postoperative wound-healing complications ($p < 0.05$).

Conclusion: In this series, PA remains a manageable complication of FAVGs in hemodialysis patients. Careful puncture technique and early surgical repair may preserve access durability and preserve dialysis access function.

CO-88: CARDIOVASCULAR MORTALITY FOLLOWING FEMORAL ARTERIOVENOUS GRAFT CREATION IN HEMODIALYSIS PATIENTS

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Introduction: Femoral arteriovenous grafts (FAVGs) serve as a salvage hemodialysis access option in selected patients with exhausted upper-limb sites. However, their value may be limited by long term cardiovascular mortality. This study aimed to assess the long-term survival outcomes of FAVG creation.

Methods: We conducted a single-center retrospective observational study of 42 hemodialysis patients who underwent 48 FAVGs at the Military Hospital of Tunis. This study was conducted over a 12-year period. The primary endpoint was overall mortality, with cause-specific mortality and access patency as secondary endpoints.

Results: Mean age of the population was 63 years and male-to-female ratio was 1.2. Late mortality reached 49% (n = 20). Myocardial infarction and stroke were the most frequent causes of death (n = 5 each), followed by septic shock (n = 3), hemorrhagic shock (n = 1), and road traffic accident (n = 1). The five remaining deaths were of undetermined cause. At death, the access remained functional in 39% of patients. One early postoperative death occurred on day 6 because of unexplained cardiorespiratory arrest, and no death was directly related to the access procedure.

Conclusion: Although no deaths were directly attributable to the access procedure, long term cardiovascular mortality remained prominent. These **Results** support FAVG use in selected patients, with close cardiovascular follow-up.

CO-89: SURGICAL MANAGEMENT OF CAROTID BODY TUMORS: A FIVE-CASE SERIES AND DIAGNOSTIC CHALLENGES

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Introduction: Carotid body tumors (paragangliomas) are rare, highly vascularized neoplasms arising from the carotid bifurcation. Their diagnosis relies on imaging, and surgical management may be challenging, particularly in advanced stages or when differential diagnoses are considered.

Methods: We report a retrospective case series of five female patients operated on for suspected carotid body tumors in our department. Clinical presentation, imaging findings, surgical management, and histopathological **Results** were analyzed. Tumors were classified according to the Shamblin classification.

Results: The mean age was 53.4 years (range: 20–76 years). The most common presentation was a lateral cervical mass (4/5 cases), while one case was incidentally discovered during cervical imaging. Imaging (ultrasound, CT, and MRI) suggested a carotid body tumor in all cases.

Tumor size ranged from 24 mm to 53 mm. According to the Shamblin classification, most tumors were classified as type II (4/5 cases), while one advanced case was classified as type III and required vascular reconstruction. This patient presented an associated carotid bifurcation aneurysm requiring resection and venous graft interposition with arterial reconstruction.

Surgical resection was performed in all patients. Histopathological examination confirmed paraganglioma in four cases. One case was reclassified as a schwannoma, highlighting the importance of differential diagnosis. All patients had uneventful postoperative outcomes.

Conclusion: Carotid body tumors are uncommon lesions with generally favorable outcomes after complete surgical excision.

The Shamblin classification is useful for predicting surgical difficulty and anticipating the need for vascular reconstruction. Histopathology remains essential for definitive diagnosis, particularly to distinguish paraganglioma from other cervical tumors such as schwannoma.

CYTOGÉNÉTIQUE

CO-90: MOSAIC ISODICENTRIC Y CHROMOSOME (IDIC(YP)): CLINICAL AND GENETIC FINDINGS IN ELEVEN PATIENTS

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Introduction: Isodicentric chromosomes of the short arm of the Y chromosome (idic(Yp)) are among the most frequent structural Y abnormalities. Highly unstable during cell division, they are often found in mosaicism with a 45,X cell line, with clinical manifestations ranging from infertile phenotypically normal males to females with Turner syndrome or individuals with disorders of sex development (DSD).

Aim: We report the clinical and genetic findings of eleven patients with mosaic idic(Yp).

Methods: Eleven patients were referred to our Genetics department between 2010 and 2026 for DSD, short stature or infertility. All patients underwent clinical examination, R-banded karyotyping of peripheral blood lymphocytes, and fluorescence in situ hybridization (FISH). The SRY locus was analyzed in nine patients and the AZF region in two.

Results: Mosaic idic(Yp) was identified in all patients, with a 45,X/46,X,idic(Yp) ratio ranging from 0.06 to 6. The 45,X cell line predominated in six patients: three females presenting with Turner syndrome stigmata, one male with azoospermia, and two patients with disorders of sex development (DSD). In contrast, the 46,X,idic(Yp) cell line was predominant in the remaining five patients. This group included two males with azoospermia, two patients with DSD, and one female referred for short stature. Fluorescence in situ hybridization (FISH) further characterized the rearranged chromosome and confirmed a dicentric Y chromosome, with a breakpoint located at Yq11.2 and duplication of the SRY locus, resulting in two copies of SRY. Molecular analysis of the azoospermia factor (AZF) regions was performed in two patients and revealed an AZF microdeletion in one case.

Conclusion: Phenotypes associated with idic(Yp) were highly variable. Although phenotypic sex is thought to depend mainly on the proportion of 45,X cells, this genotype-phenotype correlation was not consistently observed in our patients.

CO-91: CHROMOSOME 18-DERIVED MARKER CHROMOSOMES: CLINICAL AND CYTOGENETIC FINDINGS IN NINE PATIENTS.

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Introduction: Supernumerary marker chromosomes derived from chromosome 18 are rare cytogenetic abnormalities associated with considerable phenotypic variability, particularly involving neurodevelopmental delay, dysmorphic features, and congenital anomalies.

Aim: To describe the clinical and cytogenetic features of patients carrying a supernumerary marker chromosome derived from chromosome 18.

Methods: Nine patients were referred to our Genetics Department between 2007 and 2026 for prenatal or postnatal features suggestive of a chromosomal disorder. All patients underwent clinical evaluation, R-banded karyotyping of peripheral blood lymphocytes or amniotic fluid cells, and fluorescence in situ hybridization (FISH).

Results: The cohort comprised nine patients (four females and five males), including two prenatal cases diagnosed at 15 and 25 weeks of gestation. Prenatal ultrasound was normal in one case and showed omphalocele with polyhydramnios in the other. Dysmorphic features were observed in 8/9 patients, psychomotor delay in 6/9, microcephaly in 4/9 patients and seizures in 3/9. Genital abnormalities, including cryptorchidism and testicular ectopia, were present in 4/5 males. Additional findings included strabismus (2/8), limb abnormalities (3/8), ventricular septal defect, spastic quadriplegia, kyphosis, myopia, neonatal respiratory distress, intrauterine growth retardation, and language delay. Brain imaging was normal in three patients, while one showed moderate ventricular dilatation with enlarged cisterna magna. Cytogenetic and molecular analyses identified isochromosome 18p in eight patients and ring chromosome 18 in one.

Conclusion: Supernumerary marker chromosomes derived from chromosome 18 are associated with a broad and heterogeneous clinical spectrum. Molecular cytogenetic characterization is essential for accurate diagnosis, genotype-phenotype correlation, genetic counseling, and appropriate multidisciplinary follow-up.

DERMATOLOGIE

CO-92: BEYOND THE SKIN: EFFECTS OF PSORIASIS ON LIFE QUALITY AND WORK PRODUCTIVITY IN TUNISIA

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Introduction: Psoriasis significantly affects psychosocial well-being, quality of life and professional performance, beyond its skin manifestations. Data on its impact on quality of life and productivity at work are not well known in Tunisia.

Methods: A cross-sectional study was conducted among active patients with psoriasis attending the Dermatology Department of Habib Thameur Hospital, Tunis from June, 1st, 2025 to September, 1st, 2025. Disease severity was assessed using the Psoriasis Area and Severity Index (PASI). Quality of life was assessed using the Dermatology Life Quality Index (DLQI), while occupational performance was evaluated using the Work Productivity and Activity Impairment (WPAI) questionnaire. Sociodemographic and clinical data, including disease severity, were also collected.

Results: A total of 52 patients with psoriasis were enrolled (mean age 42 ± 13 years) with male predominance (sex ratio=1.3). The mean disease duration was 11 ± 7 years. The majority of patients were employed in the service sector (39%), followed by manual labor (31%) and administrative or clerical positions (18%). The most common clinical form was plaque psoriasis (58.3%), followed by guttate (12%), pustular (8%), and erythrodermic psoriasis (4%). Nail involvement was present in 27% of cases. The mean PASI score was 12.4 ± 8.1 , with 25% of patients classified as having mild psoriasis ($PASI \leq 7$), 45% as moderate ($PASI 8-20$), and 30% as severe ($PASI > 20$). Patients with higher PASI scores were more likely to have nail involvement ($p = 0.02$). The mean DLQI score was 13.6 ± 6.1 , with 48% reporting severe quality-of-life impairment ($DLQI \geq 11$). The WPAI revealed a mean overall work productivity loss of $32.4\% \pm 15.9$, mainly due to presenteeism ($21.7\% \pm 13.4$), while absenteeism was less frequent ($6.9\% \pm 5.2$). Mean daily activity impairment was $34.8\% \pm 17.2$. Statistical analysis showed no correlation between psoriasis severity and DLQI. Higher DLQI scores were significantly associated with greater work productivity loss ($p < 0.001$). Patients employed in manual labor reported significantly higher WPAI scores than those in administrative positions ($p = 0.021$).

Conclusion: Psoriasis significantly impacts both quality of life and work productivity, in addition to clinical severity. The observed correlations underscore the need for comprehensive management strategies addressing both physical symptoms and psychosocial and occupational consequences.

ENDOCRINOLOGIE

CO-93: CARDIOMETABOLIC POLYPHARMACY IN ELDERLY DIABETICS

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Introduction: Elderly patients with type 2 diabetes frequently accumulate multiple cardiometabolic drug classes, raising concern about iatrogenic risk. This study assessed the burden of cardiometabolic polytherapy and its clinical determinants in a geriatric diabetic population.

Methods: A cross-sectional descriptive study was conducted in subjects aged 60 years or older, hospitalized in the Department of Endocrinology, Diabetology and Nutrition at the Military University Hospital of Sfax during 2025. A therapeutic burden score (0–6) was built from active drug classes (statin, fibrate, ezetimibe, antihypertensive, oral antidiabetic, insulin); high burden was defined as ≥ 4 classes. Comparisons used the Mann-Whitney U test and Chi-square test.

Results: Among 46 patients (mean age 68.9 ± 7.6 years, diabetes duration 13.4 ± 8.6 years), the mean burden score was 3.4 ± 0.9 , with 47.8% classified as high burden. High burden was

significantly associated with hypertension (95.5% vs 54.2%, $p=0.004$) and dyslipidemia (90.9% vs 58.3%, $p=0.029$), with a non-significant trend toward older age (70.6 vs 67.3 years, $p=0.061$). No association was found with diabetes duration or cardiovascular history ($p>0.05$).

Conclusion: Nearly half of elderly diabetic inpatients carry a high cardiometabolic drug burden, driven mainly by hypertension and dyslipidemia rather than diabetes chronicity; systematic medication review appears warranted to balance metabolic control against iatrogenic risk in this vulnerable population.

CO-94: HIDDEN LIVER FIBROSIS RISK IN HOSPITALIZED DIABETICS

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Introduction: Metabolic-associated liver fibrosis is underdiagnosed in type 2 diabetes, and its nutritional determinants remain poorly defined in hospitalized elderly patients.

Methods: Subjects aged 60 years or older, hospitalized in the Department of Endocrinology, Diabetology and Nutrition at the Military University Hospital of Sfax during 2025, had liver fibrosis risk estimated by the FIB-4 score (≥ 1.3 defining possible fibrosis). Nutritional and metabolic covariates (BMI, waist circumference, albumin, triglycerides, HbA1c, age, diabetes duration) were compared using the Mann-Whitney U test.

Results: Among 39 patients, mean FIB-4 was 1.61 ± 0.69 , with possible fibrosis in 24 (61.5%). Patients with elevated FIB-4 trended older (70.4 vs 65.1 years, $p=0.054$) and had numerically higher BMI (30.7 vs 28.6 kg/m², $p=0.133$), without reaching significance. No association emerged with HbA1c, triglycerides, albumin, or diabetes duration (all $p>0.05$).

Conclusion: Nearly two-thirds of hospitalized elderly diabetics show a possible liver fibrosis signal independent of glycemic control, supporting systematic hepatic screening and integration of nutritional assessment into metabolic liver disease management in this population.

CO-95: ANXIETY BEYOND THYROID CONTROL: ASSOCIATED CLINICAL AND LIFESTYLE FACTORS IN TREATED HYPOTHYROIDISM

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Introduction: Anxiety is common in hypothyroidism and may persist despite adequate biochemical control.

Aim: To assess the frequency of anxiety and identify the sociodemographic, clinical and lifestyle factors associated with it in patients with treated, biochemically euthyroid hypothyroidism.

Methods: This 5-month analytical cross-sectional study included adults aged 18–65 years with treated hypothyroidism and confirmed biochemical euthyroidism. Patients with pregnancy, breastfeeding, major psychiatric disorders, psychotropic treatment, diabetes, cardiovascular disease, or severe chronic or acute illness were excluded. Sociodemographic, clinical and

lifestyle data were collected. Anxiety and sleep quality were assessed using the Hospital Anxiety and Depression Scale–Anxiety subscale (HAD-A) and the Pittsburgh Sleep Quality Index (PSQI), respectively. Comparative analyses and Spearman correlations were performed.

Results: Sixty-one patients were included, predominantly female (91.8%), with a mean age of 49.7 ± 11.7 years, mean BMI of 30.7 ± 5.4 kg/m², and mean waist circumference of 103.7 ± 13.0 cm. Physical activity was moderate in 63.9% and low in 27.9% of patients. Poor sleep quality was found in 70.5% (mean PSQI: 8.9 ± 4.8), and definite anxiety in 54.1% (mean HAD-A: 11.2 ± 6.5). Primary education level was most common overall (39.3%) and more frequent among anxious patients (51.5% vs 14.3%; $p=0.046$); age and sex did not differ significantly between groups. Anxious patients had poorer sleep (PSQI: 12.6 ± 2.8 vs 4.1 ± 2.5 ; $p<0.001$) and more frequent persistent cognitive (81.8% vs 42.9%; $p=0.007$) and skin/hair symptoms (100% vs 52.4%; $p<0.001$). Physical activity, anthropometric and thyroid parameters were similar between groups. HAD-A correlated with PSQI ($\rho=0.825$; $p<0.001$), BMI ($\rho=0.278$; $p=0.030$) and waist circumference ($\rho=0.260$; $p=0.045$), but not with TSH ($\rho=0.035$; $p=0.787$).

Conclusion: Anxiety was frequent despite biochemical euthyroidism and was associated with poorer sleep quality, persistent symptoms, lower educational level and adiposity, but not with TSH or physical activity.

CO-96: FENUGREEK SUPPLEMENTATION IN TYPE 2 DIABETES: A PROSPECTIVE CONTROLLED INTERVENTIONAL STUDY

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Introduction: Fenugreek (*Trigonella foenum-graecum*) has attracted growing interest for its hypoglycemic and hypolipidemic properties in type 2 diabetes (T2D), but clinical evidence remains heterogeneous.

Aim: To assess the effects of fenugreek supplementation on glycemic, lipid and anthropometric parameters in T2D.

Methods: This was a prospective controlled non-randomized interventional study conducted over 5 months, including T2D patients aged 18–70 years with stable antidiabetic treatment. Other diabetes types, severe renal, hepatic or cardiac disease, recent cardiovascular events, glycemic instability and fenugreek allergy precluded inclusion. The intervention group received whole fenugreek seeds (10 g/day) for three months alongside usual treatment; controls received usual treatment alone. Anthropometric, biochemical and dietary parameters were assessed at baseline and three months. Intra- and intergroup comparisons and Pearson correlations were performed.

Results: Fifty-three patients were included: 28 in the fenugreek group and 25 controls. Mean age was 60.1 ± 5.6 versus 59.0 ± 7.9 years in the fenugreek and control groups, respectively, with female predominance (sex ratio=0.6); middle socioeconomic status predominated in both groups. Fenugreek adherence was 92%. Changes in BMI, waist circumference and fasting glucose were not statistically significant. HbA1c decreased from 10.22% to 8.61% with fenugreek ($p=0.001$), with a significant intergroup difference at three months ($p<0.001$). At three months, total cholesterol (3.89 vs 4.79; $p=0.013$) and LDL-C (2.03 vs 2.98; $p=0.015$) were lower with fenugreek. HDL-C increased from 1.11 to 1.34 ($p=0.039$).

Conclusion: Three-month fenugreek supplementation

improved glycemic control and lipid profile in T2D, supporting its promising complementary nutritional intervention in T2D, although further randomized controlled studies are needed to confirm its efficacy.

CO-97: MICRONUTRIENT INTAKE AND METABOLIC CONTROL IN ELDERLY PATIENTS WITH DIABETES: A CROSS SECTION STUDY

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Introduction: Micronutrient deficiencies are common in older adults and amplified in type 2 diabetes by disease-related metabolic disturbances. Several micronutrients have been proposed as adjunctive targets for glycemic control, raising the hypothesis that correcting intake could support metabolic control in older diabetic patients [1–4].

Objective: To assess dietary micronutrient and caloric intake and their association with glycemic and lipid control in elderly diabetics.

Methods: A cross-sectional study of 103 diabetic patients aged over 65 at Charles Nicolle Hospital endocrinology department. Our dietitian assessed daily intake of vitamins B1, B6, B9, B12, C, D, E, and calories, classified as deficient below reference thresholds. HbA1c and lipid profile were recorded, associations tested via Pearson/Spearman correlations and chi-square tests.

Results: Mean age was 70.0 ± 5.7 years; mean HbA1c, $8.6 \pm 2.2\%$. energy intake was 1632 ± 607 kcal/day, with 52% below 1500 kcal/day. Inadequate micronutrient intake was highly prevalent: 99.0% (vitamin D), 64.7% (B12), 59.8% (B1), 57.8% (B9), 56.9% (B6), 46.5% (vitamin C), 26.7% (vitamin E). No micronutrient was significantly associated with HbA1c or lipids ($p > 0.05$); however, caloric intake correlated with micronutrient intakes ($r = 0.29-0.68$, $p < 0.01$).

Conclusion: These elderly diabetic patients faced double malnutrition risk, with widespread caloric and micronutrient inadequacy. no single micronutrient correlated with glycemic or lipid control, suggesting overall food intake, rather than any single nutrient, drives nutritional risk, making caloric intake a simpler, more practical screening marker. Larger, longitudinal studies with serum confirmation are needed to determine whether correcting deficiencies improves outcomes.

CO-98: SGLT2 INHIBITOR-ASSOCIATED EUGLYCEMIC DIABETIC KETOACIDOSIS IN TYPE 1 DIABETES: A NARRATIVE REVIEW

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Introduction: Sodium–glucose cotransporter-2 (SGLT2) inhibitors have been evaluated as adjuncts to insulin therapy in adults with type 1 diabetes (T1D). However, their use is

associated with an increased risk of diabetic ketoacidosis (DKA), including euglycemic DKA (EDKA), which may be missed because marked hyperglycemia is absent. This narrative review examines SGLT2 inhibitor–associated EDKA in T1D, with emphasis on its clinical presentation, precipitating factors, and risk-mitigation strategies.

Methods: We conducted a narrative review of PubMed, Embase, and regulatory safety sources for case reports, case series, and observational studies describing SGLT2 inhibitor–associated DKA in adults with T1D.

Results: EDKA, characterized by ketosis and high-anion-gap metabolic acidosis with blood glucose <250 mg/dL (13.9 mmol/L), has been described with several SGLT2 inhibitors. It may occur shortly after treatment initiation or during acute physiological stress. Common contributing factors include insulin dose reduction or omission, insulin-pump failure, reduced carbohydrate intake or fasting, dehydration, infection, surgery, vomiting, and alcohol consumption. Near-normal glucose concentrations may delay ketone testing and diagnosis. Where off-label SGLT2 inhibitor use occurs, specialist supervision, careful patient selection, structured education, and access to blood ketone monitoring are essential.

Conclusion: SGLT2 inhibitor–associated EDKA is a serious medication-related safety concern in T1D. Risk mitigation requires clear sick-day and perioperative medication-holding rules, prompt assessment of blood β -hydroxybutyrate during symptoms or high-risk situations, and timely management of ketosis.

CO-99: OBSTRUCTIVE SLEEP APNEA AND TYPE 2 DIABETES MELLITUS: A BIDIRECTIONAL ENDOCRINE-METABOLIC ASSOCIATION

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Introduction: Obstructive sleep apnea (OSA) and type 2 diabetes mellitus (T2DM) commonly coexist and may reinforce each other through shared obesity-related and disease-specific mechanisms. This narrative review summarizes the pathophysiological links between OSA and T2DM and assesses the metabolic effects of continuous positive airway pressure (CPAP).

Methods: A narrative review of PubMed- and Embase-indexed literature was undertaken, emphasizing studies on sleep-disordered breathing, insulin resistance, incident T2DM, and glycemic outcomes with CPAP.

Results: OSA is associated with incident T2DM independently of adiposity in several cohort studies. Intermittent hypoxia and sleep fragmentation promote sympathetic activation, hypothalamic–pituitary–adrenal axis dysregulation, oxidative stress, and low-grade inflammation, which impair insulin signaling and may contribute to β -cell dysfunction. Conversely, T2DM may increase OSA susceptibility through obesity, autonomic neuropathy, and altered ventilatory or upper-airway control; evidence for this reverse pathway is less definitive.

In patients with both disorders, CPAP may modestly reduce HbA1c, with benefit related to nightly adherence; however, randomized-trial evidence is heterogeneous and CPAP should not replace standard diabetes management. Screening recommendations vary, and implementation in diabetes care remains inconsistent.

Conclusion: OSA and T2DM form a clinically important, potentially bidirectional cardiometabolic association. Targeted OSA assessment is warranted in patients with T2DM who have obesity, resistant hypertension, sleep-related symptoms, or suboptimal glycemic control. Integrated management, including weight reduction, CPAP when indicated, and optimized diabetes treatment, may improve metabolic and cardiovascular risk profiles.

CO-100: MEDULLARY THYROID CARCINOMA: EPIDEMIOLOGICAL DATA, CONTRIBUTION OF CALCITONIN ASSAY AND CYTOPUNCTURE

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Introduction: Medullary thyroid carcinoma (MTC) is a rare neuroendocrine tumor arising from parafollicular cells, accounting for 5–10% of thyroid cancers. It occurs in sporadic and familial forms, the latter included in Multiple Endocrine Neoplasia type II (MEN2). Our aim is to describe the clinical, paraclinical, therapeutic, and follow-up characteristics of MTC, and to assess the contribution of cytopuncture and calcitonin assay to diagnosis.

Methods: Retrospective study conducted in our department over a 6-year period (2016–2022), including 8 patients diagnosed with MTC on final histopathological examination of surgical specimens.

Results: All patients were women, with a mean age of 51.5 years, presenting after a mean delay of 6.6 months, mostly with isolated anterior cervical swelling. Compressive symptoms included high dysphagia (n=3) and dysphonia (n=1); flush syndrome was noted in one case. Ultrasonography showed thyroid nodules (10–39 mm), classified EU-TIRADS 4 in 6 cases. Preoperative calcitonin was elevated (>100 pg/mL) in only a quarter of patients, and cytopuncture was suggestive of MTC in a quarter of cases. Extension work-up (n=6) showed lymph node or bone metastasis in one case each. All patients underwent total thyroidectomy with bilateral central lymphadenectomy, extended to lateral neck dissection in half of the cases; half had lymph node involvement. One patient had parathyroid hyperplasia consistent with MEN2A. Adjuvant radiotherapy was given in 3 patients, and radioactive iodine in one. Postoperative calcitonin normalized in half of the patients over a mean follow-up of 2.31 years.

Conclusion: MTC is mainly revealed by a thyroid nodule, and calcitonin assay above 100 pg/mL strongly predicts diagnosis. Treatment relies on total thyroidectomy with lymph node dissection.

ETHIQUE

CO-101: ETHICAL DILEMMAS IN THE LEARNING PROCESS OF DIGESTIVE ENDOSCOPY: THE PRACTITIONERS' S PERSPECTIVE.

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Introduction: Digestive endoscopy is central to hepato-gastroenterology (HGE) practice and requires mastering a technically demanding, high-risk procedure alongside deep clinical knowledge. Training traditionally happens through progressive immersion — trainees learn "on the job" by working alongside senior physicians, attending case discussions, and gradually taking on procedures themselves.

Because endoscopy carries real potential for harm, teaching it directly on patients creates tension between two duties: the physician's obligation toward the patient (respect for physical/moral integrity, informed consent, non-maleficence) and the institution's obligation to train competent future specialists.

Methods: We conducted a cross-sectional, self-administered survey among Tunisian gastroenterologists, recruited via the Tunisian Society of Gastroenterology mailing list. We included 162 physicians: 134 specialists (69 hospital-based, 65 private) and 28 senior residents, all trained in Tunisian university hospitals and currently practicing locally. We excluded junior residents and physicians trained or practicing abroad long-term. Our anonymous questionnaire collected demographics plus 36 closed questions across five domains: patient-knowledge estimation, prior training, first endoscopic gestures, supervisor attitude, and ethical situations.

Results: We enrolled 162 gastroenterologists, corresponding to a 54% response rate among physicians contacted and 43% of all gastroenterologists registered with the National Council of the Order of Physicians in 2021. The sex ratio was 0.51, with a mean age of 35 ± 5.4 years and a mean of 8.7 years of experience since graduation. Regarding their perception of patients, most physicians believed patients understood why the exam was indicated, but only about half thought patients grasped how the procedure would unfold, and most assumed patients had not signed consent and could not refuse a resident's involvement. Strikingly, 76.5% had received no formal practical training before performing their first procedures on real patients, and nearly two-thirds had relied on YouTube videos to prepare. Under supervision, most trainees performed their first proctology exam within three months and their first EOGD within six months, while colonoscopy independence typically came later. In terms of ethical practice, 23.4% admitted giving vague or false answers when asked who would perform the procedure, 82.7% did not disclose potential complications, and only 19.1% required signed informed consent. Just 22.2% introduced themselves as trainees. While 63% considered learning on patients ethically acceptable if therapeutically intended, most physicians accepted being examined themselves only when a supervisor was present, with a significant gap versus unsupervised care ($p=0.001$).

Conclusion: The study reveals a clear and largely unaddressed ethical conflict in Tunisian endoscopic training: most gastroenterologists begin practicing on real patients without prior structured training, frequently omit disclosing complications or their trainee status, rarely obtain signed informed consent, and select cases using criteria that raise equity concerns. While practitioners largely differentiate between acceptable and unacceptable trainee involvement when imagining themselves as patients, this awareness does not consistently translate into disclosure practices toward their own patients. Our **Results** argue for reinforced ethics education from early residency, greater use of simulation, and

standardized informed consent procedures.

GASTRO-ENTÉROLOGIE

CO-102: ADHERENCE TO BCLC GUIDELINES IN HEPATOCELLULAR CARCINOMA: REAL-WORLD INSIGHTS FROM A TUNISIAN COHORT

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Introduction: The Barcelona Clinic Liver Cancer (BCLC) staging system provides widely accepted recommendations for hepatocellular carcinoma (HCC) management. However, real-world adherence to these guidelines remains variable. This study aimed to evaluate adherence to BCLC recommendations and its patterns in a North African cohort.

Methods: We conducted a retrospective study between 2012 and 2025 including patients diagnosed with HCC in the gastroenterology department at Taher Maamouri Hospital in Nabeul, Tunisia. Clinical, tumor, and treatment data were collected. Patients were classified according to the BCLC staging system. Treatments were compared to guideline-recommended strategies to assess adherence. Patients treated with immunotherapy were excluded due to missing outcome data.

Results: A total of 98 patients were included, with a mean age of 69.7 ± 9.5 years and a male predominance (66.3%). The mean follow-up duration was 12.6 ± 15.2 months, and overall mortality reached 76.5%.

At diagnosis, 20.6%, 32.0%, 9.3%, and 38.1% of patients were classified as BCLC stages A, B, C, and D, respectively. No liver transplantation was performed in the cohort.

In BCLC A patients, curative-intent treatments were applied in a subset of cases, including radiofrequency ablation (50%), surgical resection (15%), and percutaneous alcoholization (25%), while the remainder were managed with palliative approaches. In BCLC B, transarterial chemoembolization was performed 86.7% of cases. The remaining patients received systemic therapy (1.3%) or best supportive care (12%).

In advanced stages, systemic therapy was administered in 62.5% of BCLC C patients, while 86.5% of BCLC D patients received best supportive care. However, deviations from guideline recommendations were observed, with a subset of advanced-stage patients undergoing non-recommended locoregional therapies such as chemoembolization.

Conclusion: Real-world management of HCC shows partial adherence to BCLC guidelines, with expected but not absolute implementation in early stages, and increasing therapeutic heterogeneity in advanced disease.

CO-103: DETERMINANTS OF ADVERSE EVENTS FOLLOWING ENDOSCOPIC BALLOON DILATION IN PEPTIC BULBAR STENOSIS

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Introduction: Endoscopic balloon dilation (EBD) is frequently performed in patients with peptic ulcer-related bulbar stenosis who remain symptomatic despite medical therapy. Although considered relatively safe, adverse events may occur. Identifying

predictors of complications may improve patient selection and procedural strategy.

Our aim was to evaluate the incidence and determinants of adverse events following EBD in patients with peptic ulcer-related bulbar stenosis.

Methods: We conducted a retrospective study including 146 patients with confirmed peptic ulcer-related bulbar stenosis. Among them, 83 underwent EBD after failure of medical therapy or recurrence.

Adverse events included intraprocedural bleeding (minor or severe) and perforation. Major complications were defined as severe bleeding or perforation.

Clinical, biological, and procedural variables were analyzed using univariate analysis. Variables with $p < 0.05$ were entered into a multivariate logistic regression model to identify independent predictors of complications.

Results: Among the 83 patients undergoing dilation (mean age 52 ± 16 years; 85.5% male), *Helicobacter pylori* infection was present in 95.1%.

Adverse events occurred in 52 patients (62.7%), consisting predominantly of minor intraprocedural bleeding. Major complications were observed in 5 patients (6.0%), including three severe bleeding events and two perforations.

In univariate analysis, complications were significantly associated with *Helicobacter pylori* infection ($p = 0.016$), shorter duration of symptoms prior to intervention (9 months vs 33 months, $p = 0.041$), the need for more than one dilation session ($p = 0.032$), and recurrence of stenosis ($p = 0.002$).

Albumin < 35 g/L showed a non-significant trend ($p = 0.081$). No significant association was found for age ($p = 0.839$), sex ($p = 0.738$), smoking status ($p = 0.937$), BMI ($p = 0.78$), or maximal dilation diameter ($p = 0.9$).

In multivariate analysis, recurrence ($p = 0.03$), the need for more than one dilation session ($p = 0.035$), and shorter symptom duration ($p = 0.033$) remained independently associated with the occurrence of complications.

Conclusion: Adverse events following endoscopic balloon dilation in peptic ulcer-related bulbar stenosis are common but predominantly minor.

Recurrence of stenosis, repeated dilation sessions, and shorter symptom duration independently predict procedural complications, suggesting that active or early-stage disease and repeated mechanical intervention may increase mucosal vulnerability.

Careful patient selection and optimized ulcer control may help reduce procedural risk.

CO-104: PREDICTORS OF ERCP FAILURE IN PANCREATIC HEAD CANCER: EXPERIENCE OF A TUNISIAN CENTER

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Introduction: Endoscopic biliary drainage using ERCP is the preferred first-line treatment for malignant biliary obstruction caused by pancreatic head cancer. However, technical failure may occur in a subset of patients.

Our aim was to identify predictors of ERCP failure in patients undergoing biliary drainage for pancreatic head cancer.

Methods: We conducted a retrospective study including patients who underwent ERCP for pancreatic head cancer-related biliary obstruction in the gastroenterology department at Taher Maamouri Hospital in Tunisia. Patients were divided into success and failure groups. Clinical, anatomical, and procedural variables were analyzed using univariate and

multivariate logistic regression.

Results: A total of 107 patients were included (72.9% men, 27.1% women) with a mean age of 66.7 ± 11.5 years. Mean bilirubin level was $315 \pm 156 \mu\text{mol/L}$, and mean common bile duct diameter was 18 ± 4.9 mm. ERCP failure occurred in 16.8% of patients.

On univariate analysis, orientation difficulty ($p = 0.021$), a higher number of cannulation attempts (7.6 ± 4.4 vs 3.4 ± 2.7 ; $p = 0.001$), the need for fistulotomy (61% vs 34%; $p = 0.029$) were associated with ERCP failure. Pancreatic duct cannulation occurred only in the success group ($p = 0.003$). Age, sex, bilirubin level, tumor size, periampullary diverticulum, and duodenal stenosis were not associated with ERCP outcome.

On multivariate analysis, the number of cannulation attempts remained the only independent predictor, with each additional attempt significantly decreasing the odds of ERCP success (OR = 0.72; $p < 0.001$).

Conclusion: ERCP failure in pancreatic head cancer appears to be mainly related to procedural difficulty rather than patient or tumor characteristics.

CO-105: HOW GREEN ARE WE? A SURVEY ON SUSTAINABLE ENDOSCOPY PRACTICES

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Introduction: Gastrointestinal endoscopy is among the leading generators of healthcare waste, producing single-use plastics, consuming substantial water for reprocessing, and contributing to carbon emissions. Awareness of and barriers to green practices remain unexplored among endoscopists in Tunisia.

Aim: This study aimed to assess gastroenterologists' knowledge, current practices, and perceived barriers regarding green endoscopy in Tunisia.

Methods: A structured, anonymous, sixteen-item questionnaire covering demographics, knowledge, self-reported eco-practices, barriers and motivators, and training needs was distributed to Tunisian gastroenterology practitioners via social networks over one week. Data were analyzed using descriptive statistics.

Results: Thirty-three practitioners responded (male-to-female ratio 1:3; 79% with less than 5 years' experience). Only 27% were familiar with the green endoscopy concept, though most of these correctly defined it (70%). Water consumption during reprocessing was markedly underestimated by 70% of respondents (less than 15 L versus an actual 20 to 35 L). Environmental impact was mainly attributed to plastic waste and water use (91% each). Overall, 76% reported at least one eco-practice, most commonly avoiding premature device opening (64%). Reusable accessories were supported by 58%. Main barriers were lack of training (82%), inadequate infrastructure (70%), and entrenched habits (36%); 73% considered institutional support insufficient. Training on reusable devices (88%) and visible recycling pathways (73%) were the top requested drivers of change; 94% requested dedicated training.

Conclusion: This survey reveals a substantial gap between awareness and practice in green endoscopy, driven by structural deficiencies and limited training. Practitioners nonetheless showed strong willingness to adopt sustainable practices, highlighting the need for structured education and infrastructure improvements.

CO-106: CAN INFLAMMATORY HEMATOLOGICAL BLOOD INDICES HELP ASSESS LIVER FIBROSIS IN CHRONIC HEPATITIS B ?

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Introduction: Non-invasive assessment of liver fibrosis is central to chronic hepatitis B (CHB) management. While APRI and FIB-4 are widely used, simple hematological indices have been proposed as surrogate markers of inflammation and fibrogenesis. This study aimed to assess their association and diagnostic performance for significant liver fibrosis in CHB.

Methods: We conducted an analytical study of 174 patients with CHB. Fibrosis was assessed by transient elastography (FibroScan®), with significant fibrosis defined as liver stiffness $>7 \text{ kPa}$ ($\geq \text{F2}$). The lymphocyte-to-neutrophil ratio (LYM/NEU), lymphocyte-to-platelet ratio (LYM/PLT), and mean platelet volume (MPV) were evaluated. Diagnostic performance was assessed using ROC curves.

Results: Significant fibrosis was present in 30.5% of patients ($n = 53$), while cytolysis was observed in 18.4% ($n = 32$). The LYM/PLT ratio was significantly higher in patients with significant fibrosis ($p = 0.008$) and showed a weak but significant correlation with liver stiffness ($\rho = 0.225$; $p = 0.003$). ROC analysis demonstrated limited discriminative ability for identifying significant fibrosis (AUC = 0.605; 95% CI: 0.512–0.698; $p = 0.028$).

In contrast, no significant association was found between significant fibrosis and the LYM/NEU ratio ($p = 0.299$) or MPV ($p = 0.30$), and no correlation was observed between liver stiffness and LYM/NEU. None of the evaluated parameters were associated with transaminase levels. Additionally, none of these markers predicted advanced fibrosis.

Conclusion: LYM/PLT showed a significant but weak association with fibrosis, with limited diagnostic performance. LYM/NEU and MPV provided no clinically relevant information. These indices cannot replace established fibrosis assessment tools.

CO-107: FACTORS ASSOCIATED WITH DISCORDANCE BETWEEN TRANSIENT ELASTOGRAPHY AND APRI IN CHRONIC HEPATITIS B

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Introduction: Non-invasive assessment of liver fibrosis is essential in chronic hepatitis B. Transient elastography (FibroScan®) and serum-based scores such as APRI are widely used clinical practice, but discrepancies may lead to fibrosis misclassification. Factors associated with such discordance remain insufficiently characterized.

Methods: We conducted an analytical cross-sectional study including patients with chronic hepatitis B. Significant fibrosis was defined as liver stiffness $>7 \text{ kPa}$ on FibroScan®. APRI was calculated from standard laboratory parameters; patients with indeterminate values (0.5–1.5) were excluded from comparative analysis. Discordance was defined as disagreement between FibroScan and APRI regarding the presence of significant fibrosis. Clinical, metabolic, and virological factors associated with discordance were analyzed using comparative tests and ROC curve analysis.

Results: A total of 174 patients were included, with a male predominance (52.8%) and a mean age of 49.6 ± 11.6 years. Significant fibrosis was present in 30.5% of patients. Discordance between FibroScan and APRI was observed in 17.1% ($n = 27$). Older age ($p = 0.004$), higher body mass index ($p = 0.02$), and elevated CAP values ($p < 0.001$) were significantly associated with discordance, whereas sex, liver enzymes, and viral load were not.

ROC analysis confirmed the predictive value of age (AUC = 0.704), BMI (AUC = 0.720), and CAP (AUC = 0.758) for identifying discordant cases.

Conclusion: FibroScan–APRI discordance occurs in a substantial proportion of patients with CHB and is associated with older age, higher BMI, and steatosis. Metabolic profiles may reduce the reliability of serum-based scores, supporting complementary use of transient elastography.

CO-108: LIVING WITH CHRONIC HEPATITIS B: DISCLOSURE, STIGMA AND FAMILY PREVENTION

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Introduction: Chronic hepatitis B (CHB) involves psychosocial challenges related to disclosure, stigma, and household prevention. We assessed disclosure patterns, stigma-related perceptions, and family prevention practices among Tunisian patients with CHB.

Methods: We conducted a cross-sectional study in 2025 among 80 patients with CHB attending a hepatology clinic in Sousse, Tunisia. A structured Arabic-language questionnaire assessed knowledge, attitudes, disclosure, stigma, and preventive practices involving patients and their families.

Results: The mean age of participants was 44 ± 11 years, and 58.8% were women. Although overall attitudes toward CHB were positive in 80% of participants, important psychosocial concerns were identified. Thirty-five percent of patients reported feeling ashamed to disclose their disease, while 45% expressed concern about their own health. Fear of transmitting HBV to relatives was reported by 30% of participants. Despite these concerns, 78.8% had disclosed their infection to their family. However, only 38.8% reported actively educating relatives about HBV. Two-thirds of patients (66.3%) recommended HBV vaccination to their relatives, but only 55% reported that family members had actually been vaccinated. Regarding personal prevention, 65% reported keeping personal objects separate, while only 38.8% reported protection during sexual intercourse. Notably, 100% of participants considered health education important and 92.5% were willing to learn more about HBV.

Conclusion: Despite frequent disclosure and generally positive attitudes, important gaps persist between disclosure and effective family prevention. Targeted education should address stigma, communication, and family screening and vaccination.

CO-109: ARGON PLASMA COAGULATION FOR GI ANGIODYSPLASIA IN ELDERLY PATIENTS: A SINGLE-CENTRE EXPERIENCE

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Introduction: Angiodysplasia is the most common vascular malformation of the GI tract and a leading cause of bleeding and iron-deficiency anaemia in patients over 60, typically involving the caecum/right colon. Argon plasma coagulation (APC) is regarded as first-line endoscopic treatment, though outcomes in antithrombotic-treated patients remain debated. We aimed to evaluate APC efficacy and safety for gastrointestinal angiodysplasia in routine practice.

Methods: We conducted a retrospective study including elderly patients treated with APC for gastrointestinal angiodysplasia. Collected data included demographics, comorbidities, antithrombotic/NSAID exposure, presentation, lesion site, number of sessions, primary haemostasis, recurrence, haemoglobin change, transfusion needs and complications. Primary success was bleeding control without recurrence after the first session.

Results: In total, 30 patients were included. The mean age was 73.4 ± 10 years (49-90); 19 patients (63%) were male, and 19 (63%) were on antithrombotic/NSAID therapy. Overt gastrointestinal bleeding was the main presenting feature in 19 patients (63%), while 11 (37%) presented with iron-deficiency anaemia. Lesions predominantly involved the caecum/right colon (83%). Primary haemostasis was achieved in 28/30 patients (93.3%), with a single treatment session sufficient in 22 (73%). Recurrent bleeding occurred in 5/26 patients (19%) and was managed with repeat APC, with or without hemoclips. Mean haemoglobin increased from 7.8 to 9.9 g/dL (mean change, +2.3 g/dL). Blood transfusion was required in 14 patients (47%), with a mean of 5.6 units transfused, whereas iron supplementation alone was sufficient in 12 (40%). No adverse events were reported.

Conclusion: APC confirmed its role as an effective, safe first-line treatment for gastrointestinal angiodysplasia, achieving primary haemostasis in over 90% of elderly, antithrombotic-treated patients, with recurrence consistent with published series and no major complications. Combining APC with clips or injection, as increasingly advocated for high-risk lesions, may further reduce rebleeding.

CO-110: PROGNOSTIC SCORES IN TUNISIAN CIRRHOTIC PATIENTS WITH HEPATOCELLULAR CARCINOMA

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Introduction: Prognostic assessment in patients with hepatocellular carcinoma (HCC) on cirrhosis requires staging systems that account for both tumour burden and liver function. We compared the performance of the Barcelona Clinic Liver Cancer (BCLC), Cancer of the Liver Italian Program (CLIP), Japan Integrated Staging (JIS), and Okuda scores for survival prediction in a Tunisian cohort.

Methods: This retrospective single-centre study included patients managed for HCC on cirrhosis at Mongi Slim Hospital from January 2011 to December 2023. Survival was estimated with Kaplan–Meier **Methods** and compared using the log-rank test. Score performance was assessed using Cox regression, Harrell's concordance index, time-dependent areas under the curve, Akaike information criterion, homogeneity, and monotonicity.

Results: A total of 190 patients were included. Median survival was 17.97 months; 1-, 3-, and 5-year survival rates were 64.47%, 29.84%, and 19.37%, respectively. All four scores significantly

discriminated survival. CLIP demonstrated the best overall performance, with a concordance index of 0.730, an Akaike information criterion of 663.80, and a 3-year AUC of 0.832. BCLC and JIS showed comparable intermediate performance, whereas Okuda was the least discriminative.

Conclusion: In this Tunisian cohort of patients with HCC on cirrhosis, CLIP provided the best overall prognostic performance. BCLC nevertheless retains an important role in guiding treatment decisions. External, multicentre validation of CLIP is needed before its routine clinical use.

CO-111: BEYOND MELD AND CHILD-PUGH: PROGNOSTIC VALUE OF THE PAN-IMMUNE-INFLAMMATION VALUE IN CIRRHOSIS

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Introduction: Systemic inflammation plays a major role in the progression of cirrhosis and the development of liver-related complications. Conventional prognostic scores, including the Model for End-Stage Liver Disease (MELD) and Child-Pugh scores, primarily reflect hepatic dysfunction and may not fully capture the systemic inflammatory component of the disease. The Pan-Immune-Inflammation Value (PIV) is a composite biomarker derived from routine blood cell counts and has shown prognostic value in several clinical settings. However, its prognostic relevance in cirrhosis remains poorly established. We aimed to assess the association of PIV with overall mortality and major complications of cirrhosis.

Methods: We conducted a retrospective single-centre study including patients with cirrhosis followed between 2014 and 2026. Clinical and laboratory characteristics, cirrhosis aetiology, liver disease severity scores (Child-Pugh, MELD, and MELD-Na), and inflammatory and nutritional indices were collected at baseline. PIV was calculated as follows: (neutrophil count $\times$ monocyte count $\times$ platelet count) / lymphocyte count. Patients were stratified into low and high PIV groups according to the cohort median. PIV values were compared according to the occurrence of ascites, upper gastrointestinal bleeding, hepatic encephalopathy, hepatocellular carcinoma (HCC), and vital status. Overall survival was estimated using the Kaplan-Meier method and compared using

Results: A total of 72 patients were included, with a mean age of 64.0 ± 10.2 years and a male-to-female ratio of 1.4. The main causes of cirrhosis were metabolic dysfunction-associated steatotic liver disease (23.9%), chronic hepatitis B (21.1%), chronic hepatitis C (19.7%), and alcohol-related liver disease (16.9%). Cirrhosis was classified as Child-Pugh A, B, and C in 27.8%, 38.9%, and 31.9% of patients, respectively. Median MELD and MELD-Na scores were 17 [12–24] and 20 [15–28], respectively. Median PIV was 231.14 [91.47–671.89]. Patients were stratified into low- and high-PIV groups according to this median PIV value.

During a median follow-up of 37.5 months, 16 patients (22.2%) died. PIV was significantly higher in patients with HCC than in those without HCC ($p=0.006$). No significant differences in PIV were observed according to the presence of ascites ($p=0.086$), upper gastrointestinal bleeding ($p=0.221$), or hepatic encephalopathy ($p=0.109$).

PIV was significantly higher among patients who died than among survivors ($p<0.001$). Kaplan-Meier analysis showed

significantly poorer overall survival in patients with high PIV compared with those with low PIV (log-rank $p=0.003$). In multivariable Cox regression analyses, PIV remained independently associated with overall mortality after separate adjustment for MELD ($p=0.001$), MELD-Na ($p=0.001$), and Child-Pugh score ($p<0.001$).

Conclusion: Higher PIV was independently associated with poorer overall survival in patients with cirrhosis, irrespective of conventional liver disease severity scores. PIV was also associated with HCC but not with individual decompensating events such as ascites, upper gastrointestinal bleeding, or hepatic encephalopathy. As an inexpensive biomarker derived from routine blood counts, PIV may provide complementary prognostic information by capturing the systemic inflammatory component of cirrhosis. Further prospective multicentre studies are required to validate its prognostic performance and determine whether adding PIV to established severity scores improves risk stratification.

CO-112: PALBI SCORE IN CIRRHOSIS: PROGNOSTIC VALUE FOR MORTALITY AND DECOMPENSATION

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Introduction: Cirrhosis is associated with a substantial risk of decompensation and mortality, underscoring the need for simple and reliable prognostic tools. The Platelet-Albumin-Bilirubin (PALBI) score combines serum bilirubin, albumin, and platelet count, thereby integrating markers of hepatic dysfunction and portal hypertension. Although initially developed in patients with hepatocellular carcinoma, its prognostic value in cirrhosis remains incompletely established.

We aimed to evaluate the prognostic value of PALBI for mortality and major complications of cirrhosis and to compare its discriminative performance with that of Child-Pugh, MELD, and MELD-Na scores.

Methods: We conducted a retrospective study of patients with cirrhosis followed between 2014 and 2026. PALBI was calculated at baseline using the validated logarithmic formula incorporating serum bilirubin, albumin, and platelet count. Patients were stratified into low/high PALBI groups according to the median. The primary outcome was all-cause mortality; secondary outcomes included ascites, hepatic encephalopathy, and variceal bleeding. Survival was assessed by Kaplan-Meier analysis and log-rank test. Mortality predictors were evaluated using univariable Cox regression. The discriminative performance of PALBI, Child-Pugh, MELD, and MELD-Na was assessed using receiver operating characteristic curves and the area under the curve (AUROC).

Results: A total of 72 patients were included, with a mean age of 64.0 ± 10.2 years and a male-to-female ratio of 1.4. The main causes of cirrhosis were metabolic dysfunction-associated steatotic liver disease (23.9%), chronic hepatitis B (21.1%), chronic hepatitis C (19.7%), and alcohol-related liver disease (16.9%). Child-Pugh classes A, B, and C accounted for 27.8%, 38.9%, and 31.9%, respectively. Median MELD and MELD-Na were 17 [12–24] and 20 [15–28]. Mean PALBI score was -1.79 ± 0.49 . Patients were stratified into low- and high-PALBI groups using the cohort median value of -1.778 as the cut-off. During a median follow-up of 37.5 months, 16 patients (22.2%) died. PALBI was higher in deceased patients than in survivors

(-1.44 ± 0.36 vs -1.90 ± 0.47 ; $p=0.001$) and showed good mortality discrimination (AUROC 0.769; 95% CI 0.646–0.892). Kaplan-Meier analysis showed that high PALBI was associated with poorer survival (89.1 vs 155.8 months; $p<0.001$), and univariable Cox regression showed higher mortality (HR 6.09; $p=0.002$), remaining significant after adjustment for Child-Pugh (HR 5.79; $p=0.012$). High PALBI was associated with ascites ($p=0.014$) and hepatic encephalopathy ($p=0.001$), but not variceal bleeding ($p=0.817$). For mortality prediction, AUROCs were 0.769 for PALBI, 0.671 for Child-Pugh, 0.828 for MELD, and 0.814 for MELD-Na. PALBI therefore showed numerically better discrimination than Child-Pugh, although its performance remained lower than that of MELD and MELD-Na.

Conclusion: High PALBI was strongly associated with mortality in patients with cirrhosis and remained prognostically significant after adjustment for Child-Pugh score. Higher PALBI values were also associated with ascites and hepatic encephalopathy, suggesting that the score may capture both hepatic dysfunction and portal hypertension-related disease severity. Its discriminative performance was numerically better than that of Child-Pugh but remained lower than that of MELD and MELD-Na. As a simple score derived from routinely available laboratory parameters, PALBI may provide complementary prognostic information in patients with cirrhosis. Larger prospective studies are needed to validate these findings.

CO-113: DIRECT BILIRUBIN-MODIFIED MELD SCORE FOR PREDICTING IN-HOSPITAL MORTALITY IN DECOMPENSATED CIRRHOSIS

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Introduction: MELD-based models use total bilirubin, whereas direct bilirubin may more specifically reflect impaired hepatic excretion. We evaluated a direct bilirubin-modified MELD (MELD-DB) for predicting in-hospital mortality in decompensated cirrhosis versus conventional MELD-based scores.

Methods: Retrospective single-centre cohort of patients hospitalised for acute decompensation of cirrhosis (2014–2026). MELD, MELD-Na, MELD-DB and MELD-DBNa were calculated from admission laboratory values; MELD-DB and MELD-DBNa substituted direct for total bilirubin in MELD and MELD-Na, respectively. The primary outcome was in-hospital mortality. Discrimination was assessed by ROC analysis (AUROC); the optimal MELD-DB cut-off was defined by the Youden index. Significance: $p<0.05$.

Results: Seventy patients were included (mean age 63.9 ± 10.2 years; 58.6% men). Median Child-Pugh 8 [6–10] (mostly B or C). Aetiologies: viral hepatitis (40.0%), MASLD (24.3%), alcohol-related (15.7%); decompensating events: ascites (74.3%), hepatic encephalopathy (25.7%), gastrointestinal bleeding (20%). Median scores: MELD 17 [12–24], MELD-Na 19.50 [15–28], MELD-DB 14 [11–22], MELD-DBNa 17 [13–25]. In-hospital mortality was 22.9% (16/70). Non-survivors had higher MELD (25 [19.5–35] vs 15 [11–19.5]), MELD-Na (29.5 [24–36.75] vs 17 [13–24.25]), MELD-DB (23 [17–33.5] vs 12 [10–17.5]), MELD-DBNa (28 [21.25–35.5] vs 15.5 [11–22]); all $p<0.001$. MELD-DB had the highest AUROC (0.835; 95% CI 0.739–0.931; $p<0.001$), followed by MELD (0.831), MELD-Na (0.817), MELD-DBNa (0.813). At the optimal cut-off 15.5, sensitivity was 87.5% (14/16), specificity 68.5% (37/54), PPV 45.2% and NPV 94.9% (37/39).

Conclusion: MELD-DB showed good discrimination for in-hospital mortality, the highest AUROC among evaluated models, although only marginally better than standard MELD. Its high NPV may identify lower-risk patients. Larger prospective studies are needed.

CO-114: DIRECT BILIRUBIN-MODIFIED MELD SCORE FOR PREDICTING IN-HOSPITAL MORTALITY IN DECOMPENSATED CIRRHOSIS

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Introduction: MELD-based models use total bilirubin, whereas direct bilirubin may more specifically reflect impaired hepatic excretion. We evaluated a direct bilirubin-modified MELD (MELD-DB) for predicting in-hospital mortality in decompensated cirrhosis versus conventional MELD-based scores.

Methods: Retrospective single-centre cohort of patients hospitalised for acute decompensation of cirrhosis (2014–2026). MELD, MELD-Na, MELD-DB and MELD-DBNa were calculated from admission laboratory values; MELD-DB and MELD-DBNa substituted direct for total bilirubin in MELD and MELD-Na, respectively. The primary outcome was in-hospital mortality. Discrimination was assessed by ROC analysis (AUROC); the optimal MELD-DB cut-off was defined by the Youden index. Significance: $p<0.05$.

Results: Seventy patients were included (mean age 63.9 ± 10.2 years; 58.6% men). Median Child-Pugh 8 [6–10] (mostly B or C). Aetiologies: viral hepatitis (40.0%), MASLD (24.3%), alcohol-related (15.7%); decompensating events: ascites (74.3%), hepatic encephalopathy (25.7%), gastrointestinal bleeding (20%). Median scores: MELD 17 [12–24], MELD-Na 19.50 [15–28], MELD-DB 14 [11–22], MELD-DBNa 17 [13–25]. In-hospital mortality was 22.9% (16/70). Non-survivors had higher MELD (25 [19.5–35] vs 15 [11–19.5]), MELD-Na (29.5 [24–36.75] vs 17 [13–24.25]), MELD-DB (23 [17–33.5] vs 12 [10–17.5]), MELD-DBNa (28 [21.25–35.5] vs 15.5 [11–22]); all $p<0.001$. MELD-DB had the highest AUROC (0.835; 95% CI 0.739–0.931; $p<0.001$), followed by MELD (0.831), MELD-Na (0.817), MELD-DBNa (0.813). At the optimal cut-off 15.5, sensitivity was 87.5% (14/16), specificity 68.5% (37/54), PPV 45.2% and NPV 94.9% (37/39).

Conclusion: MELD-DB showed good discrimination for in-hospital mortality, the highest AUROC among evaluated models, although only marginally better than standard MELD. Its high NPV may identify lower-risk patients. Larger prospective studies are needed.

CO-115: PSYCHOLOGICAL BURDEN OF INFLAMMATORY BOWEL DISEASE: ANXIETY AND DEPRESSION IN A TUNISIAN COHORT

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Introduction: Anxiety and depression are frequent comorbidities in inflammatory bowel disease (IBD) and may negatively affect patients' quality of life and disease outcomes. Data from

Tunisia remain scarce. We aimed to assess the prevalence of anxiety and depression among patients with IBD and identify associated factors.

Methods: We conducted a cross-sectional study in the Department of Gastroenterology, Ibn Al Jazzar University Hospital, Kairouan, Tunisia, including patients assessed between January 1, 2023, and June 30, 2026. Sociodemographic and clinical data were collected. Anxiety and depression were assessed using the Hospital Anxiety and Depression Scale (HADS), with a score ≥ 8 indicating clinically relevant symptoms. Factors associated with anxiety and depression were explored using univariate analyses.

Results: Sixty patients were included. The mean age was 42.1 ± 12.6 years, 58.3% were male, and 68.3% had Crohn's disease. The mean HADS-A and HADS-D scores were 9.33 ± 3.48 and 7.52 ± 3.57 , respectively. The mean total HADS score was 16.85 ± 6.54 . Clinically relevant anxiety (HADS-A ≥ 8) was observed in 38 patients (63.3%), while depression (HADS-D ≥ 8) was present in 26 (43.3%). Both conditions coexisted in 21 patients (35.0%). No significant association was found between anxiety or depression and the studied sociodemographic or clinical factors (all $p > 0.05$). Female sex showed a borderline association with depression ($p = 0.053$).

Conclusion: Anxiety and depression were highly prevalent among our patients with IBD, highlighting the need for systematic psychological screening and integrated multidisciplinary care.

CO-116: FROM ENDOSCOPY TO HISTOLOGY: DECODING HELICOBACTER PYLORI INFECTION IN CENTRAL TUNISIA

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Introduction: Helicobacter pylori infection is associated with a broad spectrum of gastroduodenal lesions, from chronic gastritis to peptic ulcer disease and precancerous gastric changes. Characterizing these patterns in specific settings may inform diagnostic and surveillance strategies. We aimed to describe the endoscopic and histopathological features of treatment-naïve H. pylori-infected patients in an under-resourced region of central Tunisia.

Methods: We retrospectively included adults with histologically confirmed H. pylori infection evaluated at Ibn Al Jazzar University Hospital, Kairouan, between January 2022 and August 2024. All underwent upper gastrointestinal endoscopy with systematic antral and fundic biopsies according to the Sydney protocol. Gastritis activity, inflammatory patterns, bacterial density, glandular atrophy (OLGA), and intestinal metaplasia (OLGIM) were assessed.

Results: Eighty-nine patients were included. Endoscopically, antral erythema was observed in 92.1%, nodularity in 21.3%, and erosions in 9.0%. Fundic erythema and erosions occurred in 28.1% and 4.5%, respectively. Duodenal bulb abnormalities included erythema (37.1%) and erosions (7.9%). Gastroduodenal ulcers were identified in 8 patients (9.0%), predominantly duodenal (87.5%). Histologically, H. pylori density was low in 25.8%, moderate in 37.1%, and high in 37.1%. Chronic inflammation was present in all patients, while active gastritis was mild in 33.7%, moderate in 38.2%, and severe in 19.1%. Glandular atrophy was detected in 14.6%, exclusively OLGA stage I. Intestinal metaplasia occurred in 6.7%, corresponding to OLGIM stage I in 33.3% and stage II in 66.7%. No dysplasia

was identified.

Conclusion: H. pylori infection was characterized by predominant antral involvement and frequent active gastritis. Early precancerous lesions were identified in a notable proportion, supporting systematic standardized histopathological assessment in this population.

CO-117: EMERGENCY SURGERY AS THE INITIAL PRESENTATION OF CROHN'S DISEASE: A RETROSPECTIVE COHORT STUDY

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Introduction: Crohn's disease (CD) may remain undiagnosed until presentation with a severe intestinal complication requiring emergency surgery. However, the extent to which emergency surgery represents the initial manifestation of previously unrecognized CD, rather than a complication of established disease, remains poorly characterized, particularly in North African populations. We aimed to compare disease duration, prior CD-specific medical treatment, and presenting circumstances among patients undergoing emergency versus elective first intestinal resection for CD.

Methods: We conducted a retrospective single-center cohort study of 71 patients who underwent their first intestinal resection for CD. Patients undergoing emergency surgery were compared with those undergoing elective surgery regarding disease duration before surgery, prior CD-specific medical treatment, and presenting circumstances. Categorical and continuous variables were compared using Fisher's exact test and the Mann-Whitney U test, respectively.

Results: Twenty patients (28.2%) underwent emergency surgery and 51 (71.8%) underwent elective surgery. Median disease duration before surgery was significantly shorter in the emergency group than in the elective group (0 months [IQR, 0–3] vs. 6 months [IQR, 2–36]; $p < 0.001$). A disease duration of zero months, corresponding to CD diagnosed at surgery, or an undocumented disease duration was observed in 70.0% of emergency cases compared with 11.8% of elective cases ($p < 0.001$). Prior CD-specific medical treatment was less frequent among patients undergoing emergency surgery than among those undergoing elective surgery (20.0% vs. 52.9%; OR, 0.22; 95% CI, 0.07–0.76; $p = 0.012$). Acute intestinal obstruction was more frequent as the presenting circumstance in the emergency group than in the elective group (40.0% vs. 17.6%), although this difference did not reach statistical significance ($p = 0.065$).

Conclusion: Emergency surgery represented the initial clinical presentation of CD in a substantial proportion of patients, with most emergency cases occurring before a definitive diagnosis or CD-specific treatment had been established. Acute obstructive symptoms should prompt consideration of underlying CD, particularly in patients without a previous diagnosis, to facilitate earlier recognition and appropriate management.

GÉNÉTIQUE

CO-118: UNRAVELING THE COMPLEXITY OF ULTRA-RARE SKELETAL DISORDERS IN TUNISIAN PATIENTS

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Introduction: Rare skeletal disorders are genetically heterogeneous, and overlapping phenotypes often complicate diagnosis and genotype–phenotype interpretation. We aimed to identify molecular defects and investigate phenotypic variability in Tunisian patients with multicentric carpotarsal osteolysis (MCTO), spondylo-thoracic dysostosis, and Escobar syndrome.

Methods: We investigated ten patients using clinical assessment, Whole-Exome Sequencing (WES), and Sanger sequencing. NetPhos was used to predict potential phosphorylation alterations, while RegulonDB and Orval were used to explore candidate modifier genes.

Results: In three siblings with MCTO, a novel MAFB variant was identified, with marked intrafamilial variability in bone osteolysis and nephropathy in one patient. In silico analysis predicted altered MAFB phosphorylation. In a patient with spondylo-thoracic dysostosis, a nonsense TPM2 variant was identified; this variant has previously been associated with Escobar syndrome and nemaline myopathy. We subsequently identified the same TPM2 variant in our Escobar syndrome cohort, supporting an expanded phenotypic spectrum. In addition, two novel variants in CHRNA7 were identified among patients with Escobar syndrome. Bioinformatic analyses revealed candidate oligogenic modifiers potentially contributing to phenotypic variability, including paraplegia in one patient and spondylo-costal malformations and epilepsy in another family.

Conclusion: Integrated clinical, genomic, and bioinformatic analyses enabled molecular diagnosis and highlighted substantial genotypic and phenotypic variability. Our findings broaden the observed phenotypic and genotypic spectrum associated with these disorders and suggest that variant-specific effects and oligogenic interactions may contribute to clinical variability. These Results emphasize the value of genomic approaches for refining genotype–phenotype correlations and understanding the molecular basis of rare skeletal disorders.

CO-119: RARE CODING VARIANT EXWAS OF T2D-AD SHARED GENES IDENTIFIES CONVERGENT SIGNALS AND DRUGGABLE TARGETS

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Introduction: Type 2 diabetes (T2D) and Alzheimer's disease

(AD) share genetic risk, offering potential early AD biomarkers. Rare coding variants linking T2D to AD remain poorly explored.

Methods: T2D-AD shared genes were identified via literature and database mining (PubMed, GWAS Catalog, Open Targets, ClinPGx, AMP). Gene-based and single-variant exome-wide association analyses of rare exonic variants were performed in the Tunisian DiAlz (n=74) and ADNI (n=807) cohorts using SKAT and PLINK. We performed pathway enrichment (g:Profiler), tissue expression analysis (AlzData), and druggability assessment (DGIdb) for significant genes.

Results: ExWAS revealed ten convergent signals between DiAlz and ADNI in SORCS1, EGFR, KIF20A, ESR2, ATF6, PIK3R1, AKAP6, PLA2G4A, PPP2R3C, and GNAS. These genes showed differential expression in frontal, temporal, and entorhinal cortices. Functional analysis linked them to Aβ signaling/clearance, neuroinflammation, and intracellular trafficking, suggesting that rare pathogenic variants may promote AD in T2D via inflammatory disruption of the blood-brain barrier. EGFR and PLA2G4A emerged as promising therapeutic targets.

Conclusion: Rare coding variants contribute to T2D-AD genetic interplay and offer candidates for early AD diagnosis and therapy. Validation in larger, diverse cohorts is needed for clinical use.

CO-120: CLINICAL UTILITY OF WHOLE-EXOME SEQUENCING IN MONOGENIC DIABETES: A TUNISIAN COHORT STUDY

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Introduction: Monogenic diabetes is frequently misclassified as type 1 or type 2 diabetes, leading to delayed diagnosis and inappropriate treatment. Its genetic heterogeneity and clinical overlap with common diabetes forms make molecular diagnosis challenging. Whole-exome sequencing (WES) enables comprehensive variant detection and may improve diagnostic accuracy and therapeutic decision-making. This study aimed to assess the diagnostic and therapeutic utility of WES in Tunisian patients with suspected monogenic diabetes.

Methods: Fifty-nine patients were selected based on diabetes onset ≤40 years, a suggestive familial pattern, and a negative immunological profile. WES data were analyzed using variant filtering and annotation pipelines, with ORVAL used to investigate complex inheritance patterns. Candidate variants were confirmed by Sanger sequencing and familial segregation analysis.

Results: WES established a molecular diagnosis in 42 of 59 patients (71.2%), identifying classical monogenic diabetes subtypes, including HNF1A-, GCK- and HNF4A-related diabetes, as well as syndromic forms. Genetic findings resulted in therapeutic reclassification and treatment adjustment in 14 patients. WES was inconclusive in 17 patients (28.8%).

Conclusion: WES demonstrated substantial clinical utility for the diagnosis of monogenic diabetes in this Tunisian cohort and directly contributed to treatment optimization. Long-read sequencing represents a promising complementary approach for unresolved cases, particularly for detecting structural and

other complex genomic variants.

CO-121: EXPANDING THE GENETIC SPECTRUM AND IMMUNE PROFILING IN ATAXIA TELANGIECTASIA PATIENTS

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Introduction: Ataxia telangiectasia (AT) is an autosomal recessive neurodegenerative disease. Although heterozygous relatives are clinically healthy, a predisposition to pathologies has been reported. We aimed to expand the genetic spectrum of AT and to further characterize immune profiles in patients and parents.

Methods: Targeted gene sequencing was performed in six patients suspected of AT. Computational analyses assessed the pathogenic potential of novel variants. Flow cytometry was used to characterize immune-cells in patients with AT and related ataxias, as well as in AT relatives. Candidate gene expression was evaluated by RT-qPCR.

Results: Six ATM variants were identified, three of which had not previously been reported in AT. In silico analyses supported their potentially deleterious effects. An Alu insertion was predicted to generate a premature stop codon, while structural analyses suggested that the novel missense variant affect ATM-ATP binding and protein flexibility. Functional analysis further supported the impact of the splicing variants on the ATM transcript. Immunophenotyping revealed increased senescent CD4+ and CD8+ T-cells in AT patients. Patients with biallelic truncating variants showed increased intermediate and non-classical monocytes and decreased classical monocytes. Notably, some immune alterations were shared between AT patients and their parents. Immune-cell distributions differed according to ATM mutation, with substantial interindividual variability. Gene-expression analysis identified FOXO3, IL33, and METTL3 as candidate genes potentially associated with disease severity.

Conclusion: Taken together, our findings expand the mutational spectrum of AT and highlight immune alterations associated with ATM genotype and heterozygosity. Dysregulation of FOXO3, IL33, and METTL3 may contribute to phenotypic variability and disease severity.

CO-122: A NOVEL RSPRY1 VARIANT EXPANDING THE MUTATIONAL SPECTRUM OF SEMDFA

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Introduction: Spondyloepimetaphyseal dysplasia, Faden-Alkuraya type (SEMDFA; OMIM #616723) is a rare autosomal recessive skeletal dysplasia caused by biallelic RSPRY1

mutations, characterized by short stature, facial dysmorphism, short fourth metatarsals, and variable intellectual disability. Its radiological features may overlap with achondroplasia, occasionally causing diagnostic confusion.

Methods: A girl aged 1 year 3 months presented with facial dysmorphism and macrocephaly (>+2 SD). Examination showed frontal bossing, depressed nasal bridge, hypertelorism, downslanting palpebral fissures, short philtrum, low-set ears, short limbs, overlapping toes, patent anterior fontanelle, narrow thorax, genu valgum, short neck and trunk, short fourth metatarsal, lumbar lordosis, pectus deformity, pes planus, and prominent heels. Brain CT showed cortico-subcortical atrophy. Radiographs suggested achondroplasia, with a bone age delay of one year. Targeted FGFR3 analysis by PCR-RFLP, karyotype, and subsequently whole-exome sequencing (WES) were performed.

Results: PCR-RFLP was negative for the common FGFR3 c.1138G>A variant, and karyotype was normal. WES identified a homozygous RSPRY1 variant, RSPRY1(NM_133368.3):c.1497_1498delCCinsG p.(Phe499LeufsTer2), which has not been previously reported in the literature or mutation databases, suggesting a novel pathogenic variant. Orthopedic follow-up was planned for the skeletal deformities.

Conclusion: This variant broadens the RSPRY1 mutational spectrum and illustrates that SEMDFA can radiologically mimic achondroplasia. WES is warranted in FGFR3-negative, achondroplasia-like phenotypes, allowing accurate diagnosis, genetic counseling, and appropriate orthopedic management.

GÉRIATRIE

CO-123: PRIMARY CARE PHYSICIANS' KNOWLEDGE AND PRACTICES REGARDING VACCINATION IN OLDER ADULTS

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Introduction: Older adults are at increased risk of vaccine-preventable infections because of immunosenescence, the high prevalence of comorbidities and age-related frailty. Primary care physicians are the main providers responsible for vaccine prescription and immunization follow-up in this population. Despite regularly updated recommendations, vaccination coverage among older adults remains suboptimal. This study aimed to assess the knowledge and practices of primary care physicians regarding vaccination in the geriatric population and to identify perceived barriers to vaccine implementation.

Methods: A descriptive cross-sectional observational study was conducted between March and September 2025 using an anonymous, voluntary, self-administered online questionnaire distributed to primary care physicians working in private practice. The questionnaire assessed knowledge of vaccination recommendations for older adults, self-reported vaccination prescribing and follow-up practices, and barriers encountered in routine clinical practice. Data were analyzed descriptively and expressed as frequencies and percentages.

Results: A total of 162 primary care physicians were included. Adequate knowledge of influenza vaccination recommendations was reported by 152 respondents (93.8%), whereas recommendations for pneumococcal and herpes zoster vaccination were correctly identified by 102 (63.0%) and 86 physicians (53.1%), respectively. COVID-19 vaccination for older adults at increased risk was considered clearly indicated

by 136 respondents (84.0%), while the recommendations for diphtheria–tetanus–poliomyelitis (DTP) booster vaccination after the age of 65 years were correctly identified by only 94 physicians (58.0%). Regarding clinical practice, influenza vaccination was systematically recommended to older patients by 148 physicians (91.4%), regular assessment of pneumococcal vaccination status was reported by 96 respondents (59.3%), and herpes zoster vaccination was routinely recommended by 71 physicians (43.8%). The use of vaccination follow-up tools was reported by 104 physicians (64.2%). The main barriers identified were patient vaccine hesitancy (106/162, 65.4%), the perceived complexity of vaccination recommendations (77/162, 47.5%), and insufficient consultation time (67/162, 41.4%). Specific training dedicated to vaccination in older adults was requested by 118 respondents (72.8%).

Conclusion: Primary care physicians demonstrated overall satisfactory knowledge of certain vaccines recommended for older adults, particularly influenza and COVID-19 vaccines. However, knowledge gaps remain regarding pneumococcal vaccination, herpes zoster vaccination, and booster immunization schedules. Self-reported vaccination practices were heterogeneous and influenced by organizational constraints and patient-related barriers. These findings highlight the need for targeted educational interventions and the implementation of practical tools to facilitate vaccination follow-up, with the aim of improving the prevention of vaccine-preventable infections among older adults in primary care.

CO-124: WHEN ISAR AND SEGA DISAGREE: PROFILE AND PROGNOSIS OF PATIENTS WITH DISCORDANT FRAILTY SCORES

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Introduction: Frailty is common among geriatric patients presenting to the emergency department (ED) and may predict adverse short-term outcomes. However, different screening tools may classify the same patient differently.

Aim: To assess ISAR–SEGA discordance, characterize discordant patients, and evaluate their one-month prognosis.

Methods: We conducted a six-month prospective descriptive study including ED patients aged ≥ 65 years. ISAR ≥ 2 was considered positive, as was SEGA in frail (9–11) or very frail (≥ 12) patients. Agreement was assessed using Cohen's kappa. Group comparisons used chi-square, Fisher's exact, or Mann–Whitney tests, with OR and 95% CI. The one-month composite outcome included functional decline, rehospitalization, ED revisit, fall, or death.

Results: Ninety-two patients were included. Mean age was 76.7 ± 7.1 years, sex ratio 1.3, and mean Charlson index 5.5 ± 1.9 . ISAR and SEGA were positive in 88.0% and 57.6%, respectively. Agreement was modest ($\kappa = 0.312$; $p < 0.001$). Discordance occurred in 28 patients (30.4%) and was exclusively ISAR+/SEGA–; none of the 53 SEGA-positive patients was missed by ISAR. Discordant patients did not significantly differ from concordant-negative patients in age, Charlson index, number of comorbidities, or medications. Nevertheless, among SEGA-negative patients, adverse outcomes occurred in 78.6% of ISAR+ versus 36.4% of ISAR– patients (Fisher's exact $p = 0.022$; OR=6.42, 95% CI 1.40–29.47). Moreover, discordant patients had an adverse-outcome rate comparable to concordant-positive patients (78.6% vs 73.6%; $p = 0.788$).

Conclusion: ISAR detected all patients identified as frail by

SEGA while additionally identifying a clinically indistinct SEGA-negative subgroup with markedly worse one-month outcomes. These findings suggest that ISAR may provide broader risk detection than SEGA in older ED patients.

CO-125: CHARLSON INDEX VS MEDICATION BURDEN: WHICH BETTER PREDICTS 30-DAY REHOSPITALIZATION?

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Introduction: Comorbidity and medication burden frequently coexist in older emergency department (ED) patients, raising questions about their respective prognostic value for early rehospitalization.

Aim: To compare the prognostic value of Charlson comorbidity index and medication burden for 30-day rehospitalization.

Methods: Over a six-month period, ED patients aged ≥ 65 years were prospectively enrolled. Charlson index and medication count were analyzed continuously using logistic regression and ROC analysis. Medication burden was also dichotomized using an exploratory ROC-derived Youden threshold. A model including both predictors assessed their independent contributions.

Results: Ninety-two patients were included. Mean age was 76.7 years, Charlson index 5.5, and medication count 4. Within 30 days, 26 patients (28%) were rehospitalized. Rehospitalized patients had higher Charlson scores (6.35 vs 5.09; $p = 0.014$) and medication counts (4.77 vs 3.85; $p = 0.037$). As continuous predictors, Charlson was associated with rehospitalization (OR=1.42, 95% CI 1.10–1.83; $p = 0.008$), whereas medication count was not (OR=1.15, 95% CI 0.96–1.37; $p = 0.126$). In a model including both predictors, only Charlson remained independently associated (aOR=1.39; $p = 0.021$). ROC discrimination was modest for Charlson (AUC=0.662; $p = 0.016$) and medication count (AUC=0.639; $p = 0.039$). A ROC-derived threshold of ≥ 6 medications identified patients with a higher Charlson index (6.46 vs 5.05; $p = 0.001$) and rehospitalization rate (50.0% vs 19.7%; $p = 0.004$). After adjustment for Charlson index, ≥ 6 medications remained independently associated with 30-day rehospitalization (aOR=2.99, 95% CI 1.07–8.35; $p = 0.036$).

Conclusion: Charlson showed a consistent linear association with rehospitalization, whereas medication count did not. However, high medication burden independently identified increased 30-day rehospitalization risk, suggesting a potential threshold effect warranting validation in larger cohorts.

GYNÉCOLOGIE-OBSTÉTRIQUE

CO-126: ADNEXAL TORSION: DIAGNOSTIC FACTORS AND THE ROLE OF CONSERVATIVE MANAGEMENT

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Introduction: Adnexal torsion is an emergency caused by

rotation of the ovary or fallopian tube around its vascular pedicle, potentially leading to ischemia and necrosis. Early treatment is essential for ovarian preservation. The aim of this study was to describe the epidemiological, clinical, biological, and radiological characteristics, as well as the therapeutic modalities, of adnexal torsion.

Methods: We conducted a retrospective descriptive study of patients managed for ovarian or adnexal torsion in Gynecology and Obstetrics Department B, Center of Maternity and Neonatology of Tunis, between January 2020 and December 2025. Clinical, radiological, surgical and histopathological data were recorded.

Results: We included 80 patients. The median age was 28 years. Pelvic pain was a constant presenting symptom, associated with nausea and/or vomiting (58.2%). Leukocytosis was present in 54% of cases, and elevated CRP in 19.2%. The most frequent ultrasound findings were the presence of a mass (96%), larger than 3 cm (89%), increased ovarian size (72%), and abnormal ovarian location (62%). Pathological Doppler flow was not predictive of necrosis: among 60 cases treated conservatively, 32% had a pathological Doppler. Laparoscopy was performed in 84% of cases and was more strongly associated with conservative treatment ($p=0.001$).

We found no variation in the prevalence of necrosis according to the time to surgical management ($p=0.2$). Twenty patients were treated by adnexectomy for suspected necrosis, of whom only 5 had necrosis on histology.

Malignancy was rare (5%). No complications were noted. Postoperative follow-up showed normal ovaries in the majority of cases: normal size (90%) and follicular appearance (97%).

Conclusion: The management of adnexal torsion relies on the correlation of clinical, biological, and ultrasound findings. The absence of association between pathological Doppler findings and necrosis, together with the poor concordance between intraoperative macroscopic appearance and histological examination, argue in favor of a conservative strategy whenever feasible, in order to preserve ovarian function.

CO-127: INTRAUTERINE CAVITY LESIONS: SONOGRAPHIC, HYSTEROSCOPIC AND HISTOPATHOLOGICAL CORRELATION IN 60 CASE

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Introduction: Intrauterine cavity lesions are a common cause of abnormal uterine bleeding. Their diagnosis relies mainly on ultrasound and hysteroscopy, while histopathological examination remains the gold standard for definitive diagnosis. The complementary role of these diagnostic modalities is essential for accurate assessment and appropriate management. The aim of this study was to evaluate and compare the diagnostic performance of ultrasound and hysteroscopy in the detection and characterization of intrauterine cavity lesions, using histopathological findings as the reference standard.

Methods: We conducted a prospective, descriptive and analytical study including 60 patients managed at the Department of Obstetrics and Gynecology B, Center of Maternity and Neonatology of Tunis, over a three-month period from October 1 to December 31, 2026. All patients underwent ultrasound and hysteroscopic evaluation followed by tissue sampling for histopathological examination. The diagnostic performance of ultrasound and hysteroscopy was assessed using histopathological findings as the reference standard.

Results: The mean age of the patients was 51.2 years. Abnormal uterine bleeding was the main presenting symptom (71%). The most common lesions were endometrial hyperplasia (35%) and endometrial polyps (32%), followed by fibroids (15%), adenomyosis (9%), and endometrial atrophy (9%). Diagnostic performance varied according to the type of lesion. Overall, ultrasound showed a sensitivity of 65%, specificity of 85%, positive predictive value of 63%, and negative predictive value of 90%. For hysteroscopy, these values were 69%, 86%, 65%, and 94%, respectively. The Youden index ranged from 0.21 to 0.80 for ultrasound and from 0.30 to 0.81 for hysteroscopy.

Conclusion: Ultrasound and hysteroscopy demonstrate complementary diagnostic performance in the assessment of intrauterine cavity lesions. Correlation with histopathological findings improves diagnostic accuracy and supports a multimodal approach to the evaluation of the uterine cavity.

CO-128: ENDOMETRIAL CANCER: ROLE OF MRI AND CORRELATION WITH FINAL HISTOPATHOLOGY A 40-CASE STUDY

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Introduction: Endometrial cancer is the most common gynecological malignancy in many developed countries. Pelvic magnetic resonance imaging (MRI) plays an important role in the preoperative assessment of disease extent. However, discrepancies may occur between MRI findings and final histopathological examination. The aim of this study was to evaluate the diagnostic performance of pelvic MRI by comparing radiological findings with final histopathological examination, particularly regarding deep myometrial invasion, cervical stromal involvement, ovarian involvement, and lymph node metastasis. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were assessed for each parameter.

Methods: We conducted a retrospective, descriptive and longitudinal study including 40 patients managed at Department B of Obstetrics and Gynecology, Center of Maternity and Neonatology of Tunis, between January 2015 and December 2024. MRI findings were compared with final histopathological examination, particularly regarding deep myometrial invasion, cervical stromal involvement, ovarian involvement, and lymph node metastasis. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were assessed for each parameter.

Results: The mean age of the patients was 62.2 years, and 83.4% were postmenopausal. Obesity, diabetes, and hypertension were the most prevalent risk factors. Abnormal uterine bleeding was the main presenting symptom (92.8%). For deep myometrial invasion, MRI showed excellent sensitivity (90.1%) and good specificity (80.3%), with both PPV and NPV exceeding 80%. Regarding cervical stromal involvement, MRI demonstrated moderate sensitivity (60%) and low PPV (39%), whereas specificity and NPV were both above 90%. For ovarian involvement, MRI showed moderate sensitivity and PPV (65% and 55%, respectively), with high specificity (94%) and NPV (98%). Regarding lymph node involvement, MRI demonstrated moderate sensitivity (53%), excellent specificity (98%), a PPV of 70%, and an NPV of 90%.

Conclusion: Pelvic MRI provides valuable information for the preoperative staging of endometrial cancer, particularly for assessing deep myometrial invasion and excluding extrauterine involvement. However, its diagnostic performance varies according to the site of disease, with limitations in detecting cervical, ovarian, and lymph node involvement. Complementary

approaches, including sentinel lymph node mapping and positron emission tomography, may help overcome some of these limitations and improve preoperative staging accuracy.

CO-129: PLACENTA ACCRETA SPECTRUM: RISK FACTORS, MANAGEMENT, AND MATERNAL-NEONATAL OUTCOMES

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Introduction: Placenta accreta spectrum (PAS) is a potentially life-threatening obstetric condition whose incidence is increasing in parallel with cesarean delivery rates. It remains associated with substantial maternal and neonatal morbidity. The aim of this study was to describe the epidemiological, diagnostic, therapeutic, and prognostic features of PAS and assess maternal and neonatal outcomes.

Methods: We conducted a retrospective descriptive study in the Department of Obstetrics and Gynecology C at the Maternity and Neonatology Center of Tunis from January 2021 to December 2023. Women with histologically confirmed PAS were included. Demographic characteristics, obstetric history, antenatal imaging, management, and maternal and neonatal outcomes were analyzed.

Results: Sixty-seven women were included. Mean maternal age was 35 years. Previous cesarean delivery (97%) and placenta previa (94%) were the predominant risk factors. PAS was diagnosed at a mean gestational age of 32 weeks. Ultrasound and magnetic resonance imaging showed sensitivities of 85% and 95%, respectively. Mean gestational age at delivery was 36 weeks + 1 day. Cesarean delivery was scheduled in 64.2% of cases and performed as an emergency in 35.8%. Cesarean hysterectomy was performed in 76%, while conservative management was attempted in 24%, with an 81% success rate. Emergency delivery was associated with higher rates of surgical reintervention (33.3% vs 14%; $p=0.046$) and postoperative morbidity (62.5% vs 30.2%; $p=0.025$). No maternal deaths occurred. Preterm birth occurred in 42%, and 61% of neonates required neonatal intensive care admission.

Conclusion: PAS is associated with substantial maternal and neonatal morbidity. Antenatal diagnosis and planned delivery in specialized centers may reduce maternal morbidity, highlighting the importance of multidisciplinary management.

CO-130: PERFORMANCE OF CHATGPT IN THE DIFFERENTIAL DIAGNOSIS OF ACUTE PELVIC PAIN: A COMPARATIVE STUDY

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Introduction: Acute pelvic pain (APP) accounts for 8–10% of gynecological emergency visits. Critical differentials—including ectopic pregnancy, adnexal torsion, pelvic inflammatory disease, and appendicitis—remain a diagnostic challenge for junior physicians. While large language models like ChatGPT show promise, comparative studies using real patient records

(rather than vignettes) are lacking.

Methods: We prospectively included 100 consecutive real patient records (history, physical exam, β -hCG, CRP, ultrasound) from women aged 15–50 admitted for APP. Two independent arms assessed each record: (i) ChatGPT-4o via a standardized prompt for top-3 differentials and urgent management; (ii) 30 residents (1st–4th year), with 8 minutes per record and no external resources. Responses were blindly scored by 3 senior experts using a validated grid (inter-rater $\kappa=0.87$). Chi2 and t-tests were used.

Results: ChatGPT significantly outperformed residents in primary diagnostic accuracy (73.8% vs 65.4%; $p=0.032$). The correct diagnosis was listed in the top-3 in 91.9% vs 84.0% ($p=0.041$). Appropriate management was proposed in 71.0% vs 63.5% ($p=0.047$). For ruptured ectopic pregnancy, accuracy reached 93.3% vs 73.3% ($p=0.010$); however, for adnexal torsion, performances were similar (62.0% vs 58.0%, $p=NS$). Mean response time was drastically shorter for ChatGPT (3.2s vs 390s; $p<0.001$) (Table 1).

Conclusion: ChatGPT demonstrates superior diagnostic accuracy, comprehensiveness, and speed over residents for APP. Although it cannot replace clinical judgment, its integration as a hybrid cognitive safety net could reduce diagnostic errors and improve triage efficiency, particularly during night shifts or in peripheral Tunisian hospitals without senior supervision.

CO-131: BARRIERS TO CERVICAL CANCER SCREENING IN TUNISIA: A CASE-CONTROL STUDY

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Introduction: Cervical cancer remains a heavy burden in Tunisia, with an estimated incidence of 4.5 per 100,000 women and over 200 new cases diagnosed annually. Since 2010, Tunisia has implemented an organized screening program offering free Pap smears to women aged 30–65. Yet, the reality on the ground is stark: national coverage barely reaches 25% , leaving the vast majority of at-risk women unscreened. As Ob-Gyn residents, we see the devastating consequences daily—women presenting with advanced, preventable cancers. Understanding why women stay away from screening is not just an academic exercise; it is a moral imperative. Aim: Identify barriers to cervical cancer screening in Tunisia.

Methods: We conducted a multicenter case-control study across five public screening centers in Tunisia (Tunis, Sfax, Sousse, Monastir, and Kairouan) between January and June 2026. Cases ($n=300$) were eligible women aged 30–65 years who had never undergone a Pap smear or whose last test was over 3 years ago. Controls ($n=300$) were age-matched women who adhered to the recommended screening schedule. Data were collected via face-to-face structured questionnaires covering socio-demographics, knowledge, perceptions, logistical barriers, and gynecological history. Multivariate logistic regression identified independent predictors of non-participation.

Results: In the final multivariate model, five factors independently predicted non-participation. The strongest was low educational level (primary or none): OR 4.8 (95% CI 3.0–7.6). Rural residence followed closely: OR 3.9 (95% CI 2.5–6.1). Lack of knowledge about cervical cancer or the screening program was associated with a three-fold higher risk: OR 3.1 (95% CI 2.0–4.8). Two other significant factors were fear of the result (OR 2.4; 95% CI 1.6–3.6) and transportation difficulties

(OR 2.1; 95 % CI 1.4–3.2). Notably, urban-rural disparities were striking: in rural areas, 71.3 % of women were unscreened compared to 42.6 % in urban areas ($p < 0.001$).

Conclusion: Cervical cancer screening in Tunisia is failing a large segment of our population, particularly rural, less-educated women who fear the test and its outcomes. As future specialists, we cannot accept this status quo. Our findings call for a paradigm shift: mobile screening units, community health workers to demystify the test, and a massive educational campaign in rural areas. Beyond the statistics, this is about saving lives—and it starts with understanding the woman behind the numbers.

CO-132: ABNORMAL UTERINE BLEEDING IN PREMENOPAUSAL WOMEN: A PREDICTIVE MODEL FOR THE RISK OF ENDOMETRIAL PAT

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Introduction: Abnormal uterine bleeding (AUB) is a common reason for gynecological consultation and represents a diagnostic challenge, particularly in premenopausal women. Risk stratification remains difficult. In Tunisia, studies investigating clinical or ultrasound predictors of high-risk endometrial lesions remain limited.

Methods: We conducted a retrospective analytical study in Department B of Charles Nicolle University Hospital between 2016 and 2024. Clinical, ultrasound, and histopathological data were collected and analyzed using SPSS® version 26. The diagnostic performance of endometrial thickness was assessed using receiver operating characteristic (ROC) curve analysis.

Results: A total of 210 premenopausal women were included, of whom 4.3% had precancerous or malignant endometrial lesions. Factors associated with high-risk lesions included a consultation delay of less than 6 months, asthenia, endometrial vascularization, and absence of fibroids. An endometrial thickness ≥ 9.5 mm was predictive, with a sensitivity of 77.8% and a specificity of 85.6%.

Conclusion: Our findings support the value of integrating clinical and ultrasound parameters for endometrial risk assessment in premenopausal women with AUB. The development of a predictive model could help reduce unnecessary invasive procedures, optimize early detection, and improve patient management.

CO-133: EFFECT OF ANTENATAL VAGINAL PREPARATION ON OBSTETRIC VAGINAL TRAUMA IN PRIMIPAROUS WOMEN: A PROSPECT

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Introduction: Genital tract trauma during vaginal delivery is common, particularly among primiparous women. Vaginal lacerations may result in bleeding, require prolonged surgical repair, and lead to secondary complications such as wound dehiscence. Vaginal tissue preparation during late pregnancy may represent a simple preventive approach. The aim of this study was to evaluate the potential benefit of vaginal preparation initiated at 37 weeks of gestation in preventing

obstetric vaginal injuries.

Methods: We conducted a prospective comparative study including 120 primiparous women with singleton, term pregnancies and an appropriate-for-gestational-age fetus in cephalic presentation. Patients were divided into two groups of 60: an intervention group that underwent vaginal preparation from 37 weeks of gestation and a control group that received no vaginal preparation. Maternal and obstetric characteristics, as well as vaginal microbiological findings, were collected. The primary outcome was the occurrence of vaginal laceration. Repair duration, blood loss, and secondary wound dehiscence were also assessed.

Results: The mean maternal age was 26.1 ± 3.8 years in the intervention group and 26.4 ± 4.1 years in the control group ($p = 0.68$). Maternal and obstetric characteristics were comparable between the two groups. Vaginal discharge was reported by 84% of patients. Vaginal swabs were performed in 62% of patients, revealing candidiasis in 76% and Group B Streptococcus colonization in 31%. The rate of vaginal lacerations was significantly lower in the intervention group than in the control group (12.3% vs. 29.0%; $p = 0.03$). Mean repair time was also significantly shorter (12.4 ± 5.1 min vs. 17.8 ± 6.4 min; $p < 0.001$). Secondary wound dehiscence occurred in 2.6% of patients in the intervention group compared with 9.7% in the control group ($p = 0.08$). No significant difference was observed in mean blood loss ($p = 0.21$).

Conclusion: Vaginal preparation initiated at 37 weeks of gestation may reduce the incidence of vaginal lacerations and shorten repair time in primiparous women. This simple and easily implementable intervention during antenatal care could represent a promising strategy for preventing obstetric trauma. Larger comparative studies are warranted to confirm these findings and determine the optimal protocol for vaginal preparation.

CO-134: IMPACT OF ANTENATAL PERINEAL PREPARATION ON LABOR AND DELIVERY OUTCOMES IN PRIMIPAROUS WOMEN: A PROS

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Introduction: Childbirth represents a major life event for women; however, labor pain remains a frequent source of anxiety, particularly among primiparous women. Antenatal preparation aims to improve women's knowledge, promote pain management strategies, and enhance confidence during labor. This study aimed to assess the impact of antenatal preparation on labor pain intensity and obstetric outcomes among primiparous women.

Methods: A prospective comparative study was conducted including 220 term primiparous women, equally divided into two groups: women who attended antenatal preparation sessions and those who did not. Inclusion criteria were singleton term pregnancy with cephalic presentation and absence of maternal or fetal complications. Antenatal preparation was provided in our department by a midwife from 30 weeks of gestation and included information about labor stages, breathing techniques, maternal positions, and non-pharmacological pain management strategies. Pain intensity during the latent and active phases of labor was assessed using the Visual Analog Scale (VAS). Total duration of labor, duration of the second stage of labor, and

maternal behavior during I

Results: The mean maternal age was comparable between groups (28 years in the prepared group versus 30 years in the non-prepared group). Women who received antenatal preparation reported lower pain intensity, with a mean VAS score of 4 compared with 6 among non-prepared women. No significant difference was observed regarding the total duration of labor. However, the duration of the second stage of labor was shorter among prepared women (20 minutes versus 40 minutes). Better breathing control and reduced agitation during labor were also observed in the prepared group.

Conclusion: Antenatal preparation is a simple, accessible, and low-cost intervention that may positively influence women's experience of childbirth. Its integration into routine prenatal care should be encouraged, particularly among primiparous women.

CO-135: PREVALENCE OF ANTEPARTUM ANEMIA AND PREDICTORS OF BLOOD TRANSFUSION FOLLOWING POSTPARTUM HEMORRHAGE

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Introduction: Postpartum hemorrhage (PPH) remains a major cause of preventable maternal morbidity and mortality. Pre-existing maternal anemia reduces hematologic reserve and may impair tolerance to acute blood loss. This study aimed to assess the prevalence of antepartum anemia among women experiencing PPH and to identify factors associated with red blood cell (RBC) transfusion.

Methods: We conducted a retrospective descriptive and analytical study over a three-year period (2021–2024) in a tertiary-level maternity unit. We included 320 women who experienced PPH, defined as blood loss ≥ 500 mL after vaginal delivery or $\geq 1,000$ mL after cesarean delivery. Multivariable logistic regression analysis was performed to identify factors independently associated with RBC transfusion. Variables assessed included antepartum hemoglobin level, anemia severity, parity, mode of delivery, PPH management, and blood loss volume.

Results: The prevalence of antepartum anemia (Hb < 10.5 g/dL) was 38.4% (123 women), including 11.2% with severe anemia (Hb < 9 g/dL). Among the 320 women who experienced PPH, 24.1% (77 women) received RBC transfusion. Mean blood loss was 850 mL (range, 500–2,800 mL). Surgical hemostatic intervention was required in 6.9% of cases.

On multivariable analysis, factors independently associated with RBC transfusion were severe antepartum anemia (Hb < 9 g/dL; adjusted OR [aOR] 4.2, 95% CI 2.1–8.4; $p < 0.001$), blood loss $> 1,200$ mL (aOR 5.6, 95% CI 2.8–11.2; $p < 0.001$), surgical hemostatic intervention (aOR 3.9, 95% CI 1.6–9.5; $p = 0.002$), and emergency cesarean delivery (aOR 2.1, 95% CI 1.1–4.1; $p = 0.028$).

Among non-transfused women with moderate postpartum anemia, intravenous iron therapy was administered in 42.8% of cases. Mean immediate postpartum Hb was 7.4 g/dL in transfused women compared with 9.1 g/dL in non-transfused women. RBC transfusion was associated with a significantly longer hospital stay (4.6 vs 2.2 days; $p < 0.001$).

Conclusion: Antepartum anemia is common among women experiencing PPH and is strongly associated with the need for RBC transfusion. A comprehensive Patient Blood Management strategy, including early detection and optimal treatment

of maternal anemia during pregnancy, may help reduce transfusion requirements and PPH-related maternal morbidity.

CO-136: IMPACT OF MATERNAL OBESITY ON POSTOPERATIVE COMPLICATIONS FOLLOWING CESAREAN DELIVERY

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Introduction: The increasing prevalence of obesity among women of reproductive age represents a major challenge in obstetric practice. Among women undergoing cesarean delivery, maternal obesity (body mass index [BMI] ≥ 30 kg/m²) is associated with an increased risk of operative and postoperative complications. This study aimed to assess the incidence and types of postoperative complications following cesarean delivery in women with obesity and to identify factors associated with their occurrence.

Methods: We conducted a retrospective study over a three-year period (2022–2025), including 240 women with obesity who underwent cesarean delivery, either scheduled or emergency. Patients were stratified according to obesity class: class I (BMI 30–34.9 kg/m²), class II (35–39.9 kg/m²), and class III (≥ 40 kg/m²). Obstetric and operative characteristics, including surgical incision, operative duration, and closure of the subcutaneous tissue, were collected. Postoperative complications occurring within 30 days were assessed, including surgical site infections (SSIs), endometritis, hematoma, and venous thromboembolic events (VTEs).

Results: The overall postoperative complication rate was 26.3%. SSIs were the most frequent complication (16.2%), followed by endometritis (5.4%) and VTEs (1.7%). The incidence of wound-related complications increased significantly with obesity severity, from 10.2% among women with class I obesity to 28.6% among those with class III obesity ($p < 0.001$). On multivariable analysis, factors independently associated with wound-related complications were class III obesity (adjusted odds ratio [aOR] 3.4, 95% CI 1.6–7.2), emergency cesarean delivery (aOR 2.8, 95% CI 1.3–5.9), operative time > 60 minutes (aOR 2.1, 95% CI 1.1–4.3), and failure to close the subcutaneous tissue when its thickness exceeded 2 cm (aOR 2.5, 95% CI 1.2–5.1). Surgical re-intervention or bedside drainage was required in 4.1% of patients. Mean hospital stay was significantly longer among women who developed postoperative complications (5.8 vs 2.6 days; $p < 0.001$), with a 30-day readmission rate of 3.8%.

Conclusion: Maternal obesity is associated with substantial postoperative morbidity following cesarean delivery, predominantly infectious and wound-related complications. Risk stratification according to obesity class, optimization of antibiotic prophylaxis, appropriate management of subcutaneous tissue closure, and adequate thromboprophylaxis may help reduce postoperative morbidity and hospital length of stay.

CO-137: PREGNANCY-RELATED CHANGES IN SEXUAL FUNCTION AND BODY IMAGE AMONG PRIMIPAROUS WOMEN: A PROSPECTIVE L

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Introduction: Pregnancy is associated with profound physical, hormonal and psychological changes that may affect women's sexual health. However, sexual function remains insufficiently addressed during antenatal care, particularly in primiparous women, in whom pregnancy-related fears and misconceptions may substantially influence sexual behavior.

Methods: We conducted a prospective longitudinal study including 75 primiparous women with singleton pregnancies, recruited before 12 weeks of gestation. Sexual function was assessed during the first trimester and reassessed during the third trimester using the Female Sexual Function Index (FSFI), together with a structured questionnaire exploring sexual behavior, pregnancy-related concerns, fear of intercourse, and perceived obstetric risk. During follow-up, pregnancy complications and episodes of threatened miscarriage or threatened preterm labor were recorded. Body image was also assessed using a validated self-reported questionnaire Body Image Scale (BIS). Women requiring hospitalization for obstetric complications at inclusion were excluded.

Results: The mean maternal age was approximately 27 years, with a predominance of women aged 25–30 years.

A progressive deterioration in sexual function was observed during pregnancy. The mean total FSFI score decreased from approximately 27.4 ± 3.5 in the first trimester to 23.1 ± 4.6 in the third trimester ($p < 0.001$). The proportion of women with an FSFI score ≤ 26.55 increased from approximately 30–35% in the first trimester to 65–70% in the third trimester.

Women reporting pregnancy-related complications or a perceived risk of preterm birth showed a greater decline in FSFI scores than women with uncomplicated pregnancies. Fear that sexual intercourse could harm the fetus or trigger miscarriage/preterm birth was reported by approximately 30–40% of participants, and was associated with a reduction in sexual intercourse frequency and lower sexual satisfaction.

Approximately 40–45% of women reported feeling less attractive during the third trimester, particularly those experiencing excessive gestational weight gain and/or prominent striae. Women reporting poorer body image had lower FSFI scores, particularly in the domains of desire, arousal and satisfaction.

In multivariable analysis, pregnancy-related anxiety, fear of intercourse, poorer body image and the occurrence of threatened obstetric events were independently associated with a greater decline in sexual function.

Conclusion: Sexual function appears to deteriorate significantly throughout pregnancy, particularly during the third trimester. This decline seems to be influenced not only by physiological changes but also by pregnancy-related anxiety, fear of adverse obstetric outcomes, misconceptions regarding the safety of sexual intercourse, and deterioration of body image. These findings highlight the importance of integrating sexual health counseling, psychological support and anticipatory guidance into routine antenatal care.

CO-138: MENOPAUSE: A NATURAL TRANSITION OR A HEALTH BURDEN? PERCEPTIONS, SYMPTOMS, SEXUALITY AND HEALTHCARE-

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Introduction: Menopause represents a major biological and psychosocial transition in women's lives. Although it is a physiological process, its perception and clinical experience vary considerably according to cultural, social and individual factors. In Tunisia, data exploring women's perceptions of menopause and their relationship with symptom burden, sexual health and healthcare-seeking behavior remain limited. This study aimed to assess the perception of menopause among Tunisian women and to investigate its association with menopausal symptoms, sexual function and attitudes toward medical care.

Methods: We conducted a cross-sectional study including 185 Tunisian women aged 45–65 years attending gynecological consultations at the Maternity Center of Tunis. Sociodemographic and clinical characteristics.

Menopausal symptoms were assessed using the Menopause Rating Scale (MRS). Women's perceptions of menopause, body image, knowledge of menopausal changes and attitudes toward menopause-related healthcare were assessed using a structured questionnaire. Sexually active women with a current partner were additionally evaluated using the Female Sexual Function Index (FSFI)

Results: The mean age of participants was 54.2 ± 5.4 years, and the mean age at menopause was 49.8 ± 3.2 years. Most women were married or living with a partner (84.3%), and 68.1% reported maintaining sexual activity.

Although 60.4% of participants perceived menopause as a natural physiological transition, 31.6% described it as a difficult period and 44.9% associated it primarily with aging. A feeling of reduced attractiveness was reported by 34.1%, while 18.9% felt that menopause had negatively affected their femininity. More than half of the women (64.8%) considered themselves insufficiently informed about menopause. Menopausal symptoms were frequent. Women with a negative perception of menopause had significantly higher MRS scores than women with neutral or positive perceptions (10.8 ± 5.2 vs. 7.1 ± 4.3 ; $p < 0.001$). Among sexually active women, those reporting vaginal dryness or dyspareunia had significantly lower FSFI scores than asymptomatic women (22.5 ± 5.0 vs. 26.7 ± 3.8 ; $p < 0.001$).

Despite the high prevalence of symptoms, only 41.6% of symptomatic women had discussed menopause-related complaints with a healthcare professional. The main reasons for not seeking care were considering symptoms a normal consequence of aging (52.3%), insufficient knowledge about available treatments (36.8%) and embarrassment discussing sexual or genital symptoms (27.1%). Fear of hormone therapy was reported by 43.7% of women who had never considered menopausal treatment.

Conclusion: Menopause was perceived as a natural physiological transition by most Tunisian women; however, a substantial proportion experienced negative perceptions, significant symptom burden and deterioration of sexual health. Vaginal dryness and dyspareunia were strongly associated with poorer sexual function, while normalization of menopausal symptoms appeared to be an important barrier to healthcare-seeking. These findings highlight the need for structured menopause counseling, including education about hormonal and non-hormonal treatment options, body image and sexual health.

CO-139: ASSOCIATION OF ABO RHD BLOOD GROUPS AND DIABETES TYPES 1 IN A TUNISIAN PEDIATRIC POPULATION

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Introduction: Type 1 diabetes (T1D) is an autoimmune disease whose pathophysiology involves genetic, immunological, and environmental factors. The ABO and RHD blood groups have been associated with type 2 diabetes and several diseases such as autoimmune ones. However, evidence regarding their association with T1D remains limited and inconsistent. Proposed mechanisms underlying this association include secretor status and the relationship between ABO blood group antigens and gut dysbiosis, as well as the association between gut dysbiosis and T1D.

The aim of this study was to investigate the association between ABO RHD blood groups and T1D in a Tunisian pediatric population.

Methods: This was a cross-sectional analytical study conducted over a one-year period at Bechir Hamza Children's Hospital in Tunis. Statistical analysis was performed using SPSS software. The chi-square test was used to compare the distribution of ABO and RHD blood groups between patients with T1D and healthy controls.

Results: The study included 107 patients with T1D and 107 healthy controls. The median age of the patients at diagnosis was 7 years [4–10]. The male-to-female ratio was 1.33. No statistically significant association was found between ABO or RHD blood groups and T1D. Likewise, no significant differences in hemoglobin A1c or blood glucose levels at diagnosis were observed among the different blood groups.

Conclusion: This study did not demonstrate an association between ABO- RHD blood groups and T1D. However, it may provide a basis for future studies incorporating molecular ABO blood group genotyping together with the assessment of secretor status.

CO-140: DIAGNOSTIC VALUE OF HEMATOLOGICAL BIOMARKERS IN GRAM-POSITIVE VS GRAM-NEGATIVE BACTERIAL MENINGITIS

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Introduction: Several studies have investigated the value of the neutrophil-to-lymphocyte ratio (NLR) in cerebrospinal fluid (CSF) for differentiating between Gram-positive and Gram-negative bacterial meningitis (BM).

Our aim was to investigate the value of peripheral blood-derived hematological biomarkers in differentiating between Gram-positive and Gram-negative BM.

Methods: This retrospective, single-center study was conducted at Béchir Hamza Children's Hospital in Tunis between 2019 and 2024. It included patients with BM.

Data were collected from the laboratory information system and laboratory test request forms. Hematological ratios were defined as follows: NLR, platelet-to-lymphocyte ratio (PLR) and monocyte-to-lymphocyte ratio (MLR). Statistical analysis was performed using SPSS software. Receiver operating characteristic (ROC) curves were generated for the different ratios. The area under the curve (AUC) was used to identify the most discriminative ratios, with an AUC > 0.7 considered indicative of discriminatory ability. The optimal cutoff value for each ratio was determined using the Youden index.

Results: A total of 139 children with BM were included. The median age was 8.6 months [1.3–61.4], with a male-to-female ratio of 1.57 (85/54). The cohort was divided into two groups: Gram-positive BM (N = 67) and Gram-negative BM (N = 72).

According to table 1, PLR followed by NLR appeared to be the most discriminative ratios for distinguishing between Gram-positive and Gram-negative BM.

Conclusion: According to this study, hematological biomarkers such as PLR and NLR may have a role in the diagnostic orientation of bacterial meningitis. They could help clinicians select the appropriate empirical antibiotic therapy.

CO-141: HEMATOLOGICAL BIOMARKERS IN THE DIFFERENTIAL DIAGNOSIS OF PEDIATRIC MENINGITIS

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Introduction: Rapid differentiation between bacterial meningitis (BM) and viral meningitis (VM) remains a major diagnostic challenge, particularly in pediatric patients. Hematological biomarkers have been proposed as potential complementary tools, providing rapid, cost-effective, and widely accessible information for early diagnostic guidance.

Our objective was to evaluate the diagnostic utility of four hematological ratios for differentiating BM from VM in children.

Methods: This retrospective, single-center study was conducted at Béchir Hamza Children's Hospital in Tunis between 2019 and 2024. It included patients aged between 2 and 15.5 years, divided into two groups: those with BM (confirmed by positive cerebrospinal fluid (CSF) culture and/or PCR) and those with VM (confirmed by PCR). Data were collected from the laboratory information system and laboratory test request forms. Hematological ratios were defined as follows: neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), and monocyte-to-lymphocyte ratio (MLR). Statistical analysis was performed using SPSS software, and receiver operating characteristic (ROC) curves were generated.

Results: A total of 66 children were included. The median age was 79.7 months [44.7–109.9], with a male-to-female ratio of 1.87 (43/23). The cohort was divided into two groups: BM (N =

50) and VM (N = 16).

According to Table 1, the NLR and MLR appear to be the most discriminative hematological biomarkers for distinguishing BM from VM.

Conclusion: Hematological ratios derived from the complete blood count, demonstrated significant diagnostic performance in differentiating BM from VM in children. Although CSF analysis remains the reference standard, these hematological biomarkers may contribute to early diagnostic orientation and facilitate appropriate therapeutic management.

CO-142: ADVANCED LEUKOCYTE PARAMETERS NEU-X, NEU-Y, AND MON-X IN BACTERIAL INFECTION AND SEPSIS

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Introduction: Given the limitations of conventional markers of infection, the advanced leukocyte parameters NEU-X, NEU-Y, and MON-X may provide additional information. This study aimed to evaluate their diagnostic performance in identifying bacterial infection and sepsis.

Methods: An observational analytical study conducted in May 2026 at Mahmoud El Matri Hospital in Ariana, including patients with microbiologically confirmed bacterial infection/sepsis (CRP > 50 mg/L) compared to controls. The complete blood count was analyzed on the Mindray® BC-6200, and CRP on the Cobas® 6000. Statistical analyses were performed using SPSS® v27, with $p < 0.05$ as the significance threshold.

Results: We included 173 subjects, with a sex ratio of 0.91 and a mean age of 54.1 ± 19.7 years. We found a significantly higher increase in CRP ($172.1 [92.1-237.8]$ vs. $8.7 [1.5-13.9]$ mg/L; $p < 0.001$), WBCs ($10.02 [7.94-13.65]$ vs. $8.70 [6.75-10.33]$ G/L; $p = 0.007$), and PNN ($8.52 [5.81-11.54]$ vs. $5.36 [3.88-7.20]$ G/L; $p < 0.001$) in the infection/sepsis group. NEU-X levels were significantly higher in the infection/sepsis group, as were NEU-Y and MON-X ($p < 0.001$). Spearman's correlation analysis revealed a significant positive correlation between CRP and NEU-X, NEU-Y, and MON-X, with the latter showing the strongest correlation. The discriminatory performance of NEU-X, NEU-Y, and MON-X, assessed by ROC analysis (Table I), along with their AUCs, optimal cut-off values, sensitivities, and specificities.

Conclusion: The NEU-X, NEU-Y, and MON-X parameters were associated with infection/sepsis, with MON-X showing the best discriminatory performance, suggesting its value as a complementary marker.

CO-143: BEYOND THE COMPLETE BLOOD COUNT: HEMATOLOGICAL RATIOS AS RAPID SEPSIS BIOMARKERS

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Introduction: Early sepsis recognition remains a major clinical challenge, and inflammatory biomarkers such as procalcitonin or CRP are not always immediately available. This study evaluated the diagnostic value of eight hematological ratios (NLR, PLR, MLR, MPV/platelets, PDW/platelets, Systemic Immunoinflammatory Index (SII), Systemic Inflammatory Response Index (SIRI) and Aggregate Index Of Systemic Inflammation (AISI)) for discriminating septic patients from

healthy controls, and proposed a simplified composite score for bedside use.

Methods: CBC-derived ratios were compared between groups using the Mann-Whitney U test. ROC analysis provided AUC with 95% DeLong confidence intervals and Youden-optimal cutoffs; top markers were compared pairwise (DeLong test) and combined in a logistic model. A simplified point-based score was then derived and validated.

Results: Among 86 septic patients and 46 healthy controls, six of eight ratios differed significantly between groups ($p < 0.001$); MPV/P and PDW/P were non-discriminative. NLR showed the highest accuracy (AUC=0.970, 95%CI 0.944–0.996; sensitivity 90.7%, specificity 100%), outperforming SII (AUC=0.938, $p=0.006$) and SIRI (AUC=0.935, $p=0.024$). A logistic model combining these three markers reached AUC=0.975. A simplified 0–3 point composite score (1 point per marker above its cutoff: NLR >5.44, SII >966, SIRI >2.13) achieved AUC=0.959, with a score of 3 yielding 100% specificity and a score of 0 effectively excluding sepsis (only 6/86 septic patients scored 0).

Conclusion: NLR, SII, and SIRI are powerful, readily available biomarkers for sepsis identification. The proposed composite score offers clinicians a simple, high-performing bedside tool for rapid sepsis triage, warranting external prospective validation.

HÉMATOLOGIE CLINIQUE

CO-144: FACTORS ASSOCIATED WITH ACUTE AND CHRONIC GVHD AFTER HAPLOIDENTICAL HSCT WITH PTCY IN CHILDREN

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Introduction: Haploidentical hematopoietic stem cell transplantation (HSCT) with post-transplant cyclophosphamide (PTCy) has broadened donor availability for children lacking an HLA-identical donor. Nevertheless, graft-versus-host disease (GVHD) remains a major complication, with acute and chronic forms contributing substantially to post-transplant morbidity. Identifying factors associated with GVHD may improve risk stratification and support individualized transplant management. This study aimed to investigate clinical and transplant-related factors associated with acute and chronic GVHD in children undergoing haploidentical HSCT with PTCy.

Methods: We conducted a retrospective observational study of pediatric patients undergoing haploidentical bone marrow HSCT with PTCy. Patients were managed at the National Bone Marrow Transplantation Center, while grafts were processed and prepared at the Cell Therapy Unit of the National Blood Transfusion Center. Clinical, donor, recipient and transplant-related variables were collected and analyzed. Statistical analyses were performed using MedCalc Statistical Software. Associations were assessed using contingency tables, odds ratios (ORs) with 95% confidence intervals (CIs) and multivariate logistic regression for relevant variables.

Results: Forty-seven pediatric patients underwent haploidentical HSCT, accounting for 48 transplant procedures. Most evaluated factors, including graft cellular content, conditioning regimen,

donor age, underlying disease, donor-specific antibodies and ABO incompatibility, were not significantly associated with GVHD. Donor–recipient sex mismatch was significantly associated with acute GVHD (OR=10.0; 95% CI: 2.26–44.20; $p=0.0024$). In multivariate analysis, sex mismatch remained independently associated with acute grade II–IV GVHD (OR=17.7; 95% CI: 0.13–297.9; $p=0.0068$). No significant predictor of chronic GVHD was identified.

Conclusion: In this Tunisian pediatric cohort, donor–recipient sex mismatch emerged as the principal factor associated with acute GVHD, particularly grade II–IV disease. No significant predictor of chronic GVHD was identified. These findings highlight donor–recipient sex mismatch as a potential risk factor warranting closer post-transplant monitoring and support further investigation in larger pediatric cohorts.

CO-145: IRON CHELATION ADHERENCE IN CHILDREN WITH BETA-THALASSEMIA: LOOKING BEYOND CLINICAL FACTORS

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Introduction: Poor adherence to iron chelation therapy remains a major challenge in beta-thalassemia, increasing the risk of iron overload and long-term morbidity. Understanding barriers to adherence is particularly important in pediatric populations. Objective: To assess adherence to iron chelation therapy and identify associated sociodemographic, biological, treatment-related, and clinical factors in children and adolescents with beta-thalassemia.

Methods: We conducted a cross-sectional descriptive and analytical study of patients with beta-thalassemia followed at the Pediatric Department of Farhat Hached University Hospital, Sousse, Tunisia, from October 2024 to May 2025. Adherence was assessed using the 8-item Morisky Medication Adherence Scale (MMAS-8) and categorized as low (<6), moderate (6–8), or high (=8).

Results: Twenty-three patients were included (mean age 10.1 years; range 4–16). The mean MMAS-8 score was 5.29 ± 1.50 . Low adherence was observed in 65.2% of patients, moderate adherence in 30.4%, and high adherence in only 4.3%. Adherence was significantly associated with place of residence ($p=0.007$) and social health coverage ($p=0.030$). No significant associations were observed with age, sex, socioeconomic status, pre-transfusion hemoglobin, serum ferritin, chelation regimen, or disease- and transfusion-related complications.

Conclusion: Poor iron chelation adherence affected nearly two-thirds of our pediatric cohort. Its association with residence and social health coverage highlights the potential influence of healthcare-access and social factors, supporting targeted interventions for vulnerable children.

CO-146: QUALITY OF LIFE IN CHILDREN WITH BETA-THALASSEMIA: THE BURDEN OF IRON OVERLOAD

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Introduction: Beta-thalassemia requires lifelong transfusions and iron chelation therapy, placing a substantial burden on children and their families. Beyond clinical outcomes, preserving health-related quality of life (HRQoL) is an essential component

of comprehensive care.

Aim: To assess HRQoL in children and adolescents with beta-thalassemia and identify associated clinical and biological factors.

Methods: We conducted a cross-sectional descriptive and analytical study including 23 children with beta-thalassemia followed at Farhat Hached University Hospital, Sousse, Tunisia, from October 2024 to May 2025. HRQoL was assessed using the Pediatric Quality of Life Inventory (PedsQL) through child self-report and parent proxy-report.

Results: Mean age was 10.1 years (range: 4–16). Mean overall PedsQL scores were 74.77 ± 13.52 for children and 73.34 ± 15.26 for parents. Children with ferritin levels $>2500 \mu\text{g/L}$ had significantly lower overall HRQoL than those with levels $\leq 2500 \mu\text{g/L}$ (67.29 ± 14.83 vs. 84.69 ± 8.16 ; $p=0.006$). Higher ferritin levels were also associated with poorer physical ($p=0.004$), social ($p=0.025$), school ($p=0.021$), and psychosocial functioning ($p=0.022$). Disease- or transfusion-related complications were associated with poorer physical functioning ($p=0.040$).

Conclusion: Higher ferritin levels were associated with poorer HRQoL across several domains, suggesting that iron overload may affect not only physical well-being but also children's social and school life. Routine HRQoL assessment alongside optimal iron-overload management may help provide more comprehensive, child-centered thalassemia care.

CO-147: ROLE OF CONSOLIDATIVE AUTOLOGOUS TRANSPLANTATION IN FRONTLINE THERAPY OF PRIMARY MEDIASTINAL B CELL

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Introduction: Background: Primary mediastinal B-cell lymphoma (PMBCL) is a rare subtype of diffuse large B-cell lymphoma, predominantly affecting young adults. While R-CHOP DA-EPOCH-R and radiotherapy are commonly used as first-line treatments, the role of autologous stem cell transplantation (ASCT) as consolidation therapy remains controversial.

Methods: We conducted a retrospective single-center study including 49 newly diagnosed adult PMBCL patients treated between 2013 and 2023. Patients received either R-CHOP or DA-EPOCH-R, with or without consolidative ASCT. We analyzed progression-free survival (PFS) and overall survival (OS) using Kaplan-Meier and Cox regression models.

Results: Median age was 31 years; 67% were female. Among the 49 patients, 22 received ASCT in first line therapy. ASCT was associated with significantly longer PFS and OS, especially in patients treated with R-CHOP. The 5-year PFS was highest in the R-CHOP + ASCT group (mean PFS: 107.3 months) compared to R-CHOP alone (mean PFS: 55.7 months). Multivariate analysis confirmed CNS-IPI as an independent prognostic factor for OS. ASCT remained associated with better PFS and OS, although **Results** should be interpreted with caution due to the small sample size.

Conclusion: This study suggests a potential PFS benefit of consolidative ASCT in patients with PMBCL, particularly those receiving R-CHOP. These Results are interesting to use in underdeveloped countries which lacked new immunotherapy. These Results require confirmation through prospective, multicenter trials to define the optimal frontline treatment strategy for PMBCL.

CO-148: EVALUATION OF CHATGPT FOR DETECTING

DRUG-RELATED PROBLEMS IN HEMATOLOGY CARE

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Introduction: Drug-drug interactions (DDIs) involving anticancer agents are frequent in hematology practice and present a significant health burden, compounded by clinician time constraints and poor patient health literacy. Large language models (LLM) such as ChatGPT are increasingly used as clinical information tools. However, their reliability in identifying and explaining clinically significant DDIs in hematology remains insufficiently evaluated.

The purpose of this study was to assess the capability of ChatGPT in detecting and explaining clinically relevant DDIs encountered in hematology practice.

Methods: This prospective observational study was conducted using ChatGPT version 3.5. A total of 40 DDIs pairs involving antineoplastic agents were compiled from previously published literature and then validated using conventional drug interaction screening tools (Therisque and Thesaurus). ChatGPT's responses to each interaction submitted were then evaluated under two distinct conditions: (1) an unguided prompt consisting of a general interaction query, and (2) a guided prompt with a structured clinical context and a request for a detailed clinical interpretation of the interaction. All AI-generated responses were reviewed by specialist pharmacists, who rated their consistency and clinical relevance using a standardized scoring system.

Results: ChatGPT showed a moderate performance in direct detection of clinically significant DDIs, with an overall detection rate of 47.5% (19/40) in the unguided condition. Guided prompting significantly improved detection to 92.5% (37/40), reducing missed interactions. Improvements were most notable in Cytochrome P450 (CYP)-mediated interactions and dose-adjustment recommendations. Hallucinated or unsupported recommendations were observed in 15% of unguided responses compared with 5% under guided prompting.

Conclusion: ChatGPT demonstrated meaningful potential to assist in DDIs detection but is not sufficiently reliable as standalone tools. Expert-guided interaction substantially enhanced their performance, underscoring the critical value of hybrid pharmacist-Artificial Intelligence workflows.

CO-149: CHRONIC IMMUNE THROMBOCYTOPENIA IN CHILDREN: ETIOLOGICAL, THERAPEUTIC, AND OUTCOME CHARACTERISTICS

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Introduction: Chronic immune thrombocytopenia (cITP) is a heterogeneous disorder, yet its etiological spectrum and long-term outcomes remain poorly characterized in children.

Aim: To describe the etiological, therapeutic, and outcome characteristics of pediatric cITP and identify factors associated with secondary cITP and sustained complete remission.

Methods: We conducted a retrospective longitudinal study in a pediatric immunohematology department over 12 years (January 2010–March 2022). Patients aged under 18 years with platelet counts below 100,000/mm³ for at least 12 months were included. Logistic and Cox regression analyses were performed to identify factors associated with secondary cITP and sustained complete remission.

Results: Seventy-eight patients were included (sex ratio: 1.05; median age at diagnosis: 4.8 years [IQR: 2.5–9]; median platelet count: 17,000/mm³ [IQR: 5,000–40,000]). cITP was primary in 65 patients (83%) and secondary in 13 (17%), mainly due to inborn errors of immunity (n=11; 14%), including common variable immunodeficiency (n=3), ALPS or ALPS-like disorders (n=4), LRBA deficiency (n=1), and selective IgA deficiency (n=1). Evans syndrome occurred in six patients (8%). Watchful waiting was adopted in 30 patients (38%). Second-line treatment was required in 19 (24%) and was more frequent in secondary than primary cITP (61% vs. 17%; p=0.002). After a median follow-up of 31 months [IQR: 15–70], 18 patients (23%) achieved sustained complete remission, half spontaneously. Five-year overall survival was 98% in primary versus 77% in secondary cITP. All three deaths occurred in patients with inborn errors of immunity.

Conclusion: Inborn errors of immunity underlie one in seven pediatric cITP cases and are associated with mortality, supporting systematic immunological evaluation. Watchful waiting independently predicted sustained complete remission.

HISTOLOGIE EMBRYOLOGIE

CO-150: PATERNAL AGING : CONSEQUENCES ON SPERM PARAMETERS AND ICSI OUTCOMES

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Introduction: Advanced paternal age is increasingly common, but its impact on sperm quality and ICSI outcomes remains debated. This study assessed the association between paternal age, standard sperm parameters, and embryological outcomes.

Methods: This retrospective observational study included 235 infertile couples undergoing ICSI at Farhat Hached Hospital between January 2024 and November 2025. Couples with female age >40 years, major testicular pathology, or azoospermia were excluded. Patients were divided according to paternal age (≤40 vs >40 years). Associations were assessed using Spearman correlation and multivariate linear regression adjusting for relevant confounders.

Results: Men aged ≥40 years had significantly lower ejaculate volume (2.78 ± 0.92 vs 3.12 ± 0.85 mL; p=0.04) and progressive motility ($29.2 \pm 11\%$ vs $35.0 \pm 10.5\%$; p=0.026), with both associations persisting after adjustment. Overall sperm morphology was comparable; however, men >45 years showed a higher morphological anomaly index (2.43 ± 0.41 vs 1.89 ± 0.37 ; p=0.048). Fertilization and cleavage rates were similar between groups, whereas blastulation was significantly lower in men ≥40 years (36.87% vs 48.22%; p=0.021). The proportion of top-quality day-5 blastocysts was also lower, although not significantly (43.47% vs 53.55%; p=0.381).

Conclusion: Advanced paternal age was associated with impaired sperm volume and motility and reduced blastulation potential. These findings support comprehensive paternal assessment, including sperm DNA integrity, in men over 40 undergoing ART.

IMMUNOLOGIE

CO-151: DECLINING SIBLING BONE MARROW DONOR AVAILABILITY: IMPLICATIONS FOR HAPLOIDENTICAL TRANSPLANTATION

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Introduction: Allogeneic hematopoietic stem cell transplantation (allo-HSCT) is a potentially curative therapy for hematologic malignancies and several non-malignant hematopoietic and metabolic disorders. Potential donors include HLA-matched sibling donors (MSDs), matched or mismatched unrelated donors, haploidentical donors, and umbilical cord blood. This study aimed to evaluate the temporal evolution of the number of potential sibling donors and its impact on the probability of identifying at least one MSD.

Methods: We retrospectively analyzed families evaluated for donor identification and pre-transplant assessment for allo-HSCT between 2009 and 2025.

HLA class I screening was performed using the lymphocytotoxicity assay.

HLA class I-identical siblings were subsequently characterized by PCR-SSO for HLA class I and PCR-SSP for HLA class II. Statistical analyses were performed using R.

Results: Among 1,006 recipients, 3,775 potential sibling donors were identified, corresponding to 3.75 donors per recipient (range, 1–12). Overall, 558 recipients (55%) had at least one MSD.

Recipients with at least one MSD had a higher number of potential sibling donors (median: 4.0, IQR: 2.0–5.0) compared to those without a compatible donor (median: 3.0, IQR: 2.0–4.0).

Linear regression demonstrated a significant decrease in sibling donor availability over time ($\beta = -0.104$, $p < 0.001$), corresponding to an average reduction of approximately 0.1 sibling donor per year.

Conclusion: The probability of identifying an MSD is strongly influenced by sibling donor availability. The observed decline over time highlights the increasing importance of alternative donor strategies, particularly haploidentical transplantation, when MSDs are unavailable.

INTELLIGENCE ARTIFICIELLE

CO-152: 50 YEARS OF PUBLICATIONS ON CARDIOVASCULAR DISEASES: A MEDLINE BIBLIOMETRIC ANALYSIS (1970-2019)

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Introduction: Cardiovascular disease bibliometrics provide insights into evolving research priorities and evidence-based care development globally.

AIM To characterize the editorial, methodological, and thematic profile of international biomedical publications on cardiovascular diseases over 50 years (1970–2019).

Methods: Bibliometric study on MEDLINE using MeSH descriptor "Cardiovascular Diseases" with stratification by period: A (1970–1994) and B (1995–2019). Highly cited papers identified via Web of Science. Analysis included publication types, research fields, and health conditions.

Results: Among 2,163,207 publications (A: 641,344; B: 1,521,863), 90% were journal articles, 18% case reports, 14% review articles. Primary fields: Geriatrics/Gerontology (29%) and Biochemistry/Molecular Biology (28%). Leading journals: Circulation (n=32,206) and American Journal of Cardiology (n=29,863). Research focused on middle-aged populations, predominantly heart diseases (n=55,857), vascular diseases (n=25,324), and pregnancy-related cardiovascular complications (n=15,141). Top health problems studied: hypertension (10%), heart failure (5%), cardiac arrhythmias (2%); associated comorbidities included stroke (5%), type 2 diabetes (2%), and obesity (2%). Bibliometric trends showed increased meta-analyses and practice guidelines, particularly in Geriatrics/Gerontology and Biochemistry/Molecular Biology. Among 4,216 highly cited papers (2%): 28% epidemiology, 25% metabolism, predominantly review articles on heart failure and hypertension.

Conclusion: International cardiovascular publications reflect growing focus on heart failure and hypertension through clinico-biological, evidence-based approaches. Interdisciplinary, multicenter collaboration remains essential for advancing cardiovascular health.

CO-153: ARTIFICIAL INTELLIGENCE USE AMONG CRITICAL VERSUS NON-CRITICAL CARE NURSES: A CROSS-SECTIONAL STUDY

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Introduction: The use of artificial intelligence (AI) in healthcare is rapidly expanding across clinical settings depending on patient care demands. This study aimed to compare AI use among nurses working in Critical and non-Critical care departments in Tunisia.

Methods: We conducted a cross-sectional study in April 2026 among nurses working in four randomly selected Critical and non-Critical care departments at Habib-Bourguiba University Hospital. All eligible nurses (N=108) were invited to complete a paper-based questionnaire about their AI use in routine clinical practice.

Results: A total of 83 nurses completed the survey (response rate=77%). The most common uses of AI were monitoring clinical signs (63.9%), checking medication interactions (54.2%), searching for disease' informations (54.2%), calculating patient-specific doses (53.0%), obtaining medication storage and administration guidance (48.2%), and receiving adverse effect

alerts (44.6%). Only 3.6% reported not using AI for any of these purposes.

AI use differed significantly between the two groups. Critical care nurses were more likely to use AI for monitoring clinical signs (78.2% vs. 35.7%; $p < 0.001$), calculating doses (63.6% vs. 32.1%; $p = 0.007$), and identifying adverse drug effects (52.7% vs. 28.6%; $p = 0.038$). Conversely, non-Critical care nurses more often used AI to search for disease information (64.3%) and obtain administration guidance (57.1%).

Conclusion: AI utilization varies by clinical setting, with Critical-care nurses focusing on patient monitoring, dose calculations and adverse-effect alerts. These findings highlight the need for safe, tailored AI integration into nursing practice.

CO-154: ARTIFICIAL INTELLIGENCE IN PHYSICAL MEDICINE AND REHABILITATION: TRENDS, CHALLENGES, AND FUTURE DIRE

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Introduction: Artificial intelligence (AI) is increasingly transforming healthcare by supporting clinical decision-making, diagnostic processes, personalized interventions, and patient monitoring. Physical medicine and rehabilitation (PMR) is particularly suited to AI applications because of its multidisciplinary nature and the large volume of clinical, functional, and sensor-derived data generated during rehabilitation. However, the evolution, major research themes, and emerging directions of AI research in PM&R have not been comprehensively characterized. The aim of this study was to analyze the scientific literature on AI in PMR, identify publication trends and influential contributors, and map the major research themes and emerging areas within this

Methods: A bibliometric analysis was conducted using the Web of Science database to identify publications addressing AI applications in PM&R. Bibliographic data were analyzed using R and the Bibliometrix/Biblioshiny package. Publication trends, annual growth, citation patterns, productive authors and institutions, collaboration networks, and keyword co-occurrence were assessed to characterize the intellectual and thematic structure of the field.

Results: A total of 2,619 publications published between 1991 and 2023 were identified. Scientific production increased substantially over the study period, with an annual growth rate of 19.55%, reflecting rapidly expanding interest in AI-driven rehabilitation. The thematic analysis highlighted three

major research directions: robotics, machine learning, and virtual reality. These themes were closely associated with neurorehabilitation, functional recovery, assistive technologies, and personalized rehabilitation. The analysis also demonstrated increasing interdisciplinary collaboration between rehabilitation medicine, engineering, computer science, and other medical specialties.

Conclusion: AI research in PMR has expanded considerably over the past three decades and is progressively moving toward intelligent, technology-assisted, and personalized rehabilitation. Future research should prioritize clinical validation, ethical and legal considerations, data governance, and the integration of AI into routine patient-centered rehabilitation practice.

CO-155: ASSESSING AI TOOLS IN THE IDENTIFICATION OF UNKNOWN ORAL SOLID DOSAGE FORMS IN TOXICOLOGY LABORATORY

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Introduction: Artificial intelligence (AI) tools are increasingly used in forensic and medical decision-making but its rapid evolution complicates the selection of reliable AI tools. This study evaluated the ability of AI tools to identify unknown oral solid forms and assessed the reliability and safety of their responses.

Methods: Forty-two chromatographically characterized tablets and capsules, predominantly ecstasy, pregabalin and amlodipine, were evaluated for identification using six AI tools (Gemini, Chatgpt, Copilot, DeepSeek, GoogleLens and Claude) based on photos, weight determination and supplemented by physicochemical clues (pH, solubility) when required. AI performance was assessed using a standardized scoring system.

Results: The overall identification rate reached 54.8%. Gemini achieved the highest score (64.7%; $p < 0.001$) while Claude performed the lowest one (32.9%; $p = 0.621$). Identification of white units was limited to 11.1% for Gemini, Copilot, GoogleLens and Claude. For colored samples, recognition rates were 75% for Gemini, 41.7% for Copilot and 37.5% for DeepSeek. The recognition rate of illicit substances was 100% for Gemini, 76.9% for GoogleLens and 69.2% for Deepseek. Drugs recognition rates were 100%, 96.4% and 60.7% for Gemini, Deepseek and Chatgpt respectively. Chatgpt demonstrated superior psychotropic (42.9%) and non-psychotropic (35.7%) categorization. All AI tools failed to identify the negative sample. In addition, AI recommended pharmacist consultation in 15.1% of cases. Provision of clues increased identification from 31% to 63.9%.

Conclusion: Despite Gemini's and Chatgpt's superior performance for illicit and psychotropic substances respectively, AI-based identification remains limited. Providing pH and solubility data can improve identification but AI responses require professional or laboratory confirmation.

CO-156: TRANSFER LEARNING FOR AUTOMATIC IDENTIFICATION OF NORMAL OTOSCOPIC EXAM USING MOBILENETV3

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Introduction: Accurate identification of normal otoscopic exam versus pathological one can be challenging for non-ENT physicians. Transfer learning in Convolutional Neural Networks (CNN) is the practice of reusing a pre-trained model, such as one trained on the massive ImageNet dataset, as the starting point for a new, specific image task. Deployment is quick and easy, especially for smaller models like MobileNetV3.

Methods: A retrospective study was conducted using otoscopic images collected from our department between July 2025 and June 2026. Those images were divided into two categories: normal otoscopic exam and pathological otoscopic exam. Those labelled images were pre-processed. Then it was divided into three subsets: 80% for training, 10% for validation, and 10% for testing. Data augmentation techniques were applied to the training set to improve generalization. A convolutional neural network based on the MobileNetV3 architecture was implemented using a transfer learning approach.

Results: Our dataset contains 857 otoscopic images: 360 normal otoscopic exams and 497 pathological otoscopic exams. After training this model for, we obtain an accuracy of 97.77% in the «training set», 92.94% in the «validation set» and 95.40% in the «test set».

Conclusion: This study demonstrates that transfer learning in Convolutional Neural Networks, using a small model such as MobileNetV3, can distinguish between normal and pathological otoscopic images and thus be of great assistance to primary care physicians in determining when to refer patients to an ENT specialist.

CO-157: ASSESSMENT OF ARTIFICIAL INTELLIGENCE USE AMONG HOSPITAL PHARMACY STAFF IN TUNISIA

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Introduction: Artificial intelligence (AI) is increasingly used in healthcare. However, its reliability and usefulness in hospital pharmacy practice remain to be evaluated.

This study aims to assess hospital pharmacy staff's knowledge and use of AI tools, as well as perceived acceptability, usefulness, ease of integration, and trust.

Methods: A descriptive study was conducted among hospital pharmacy staff in 18 hospitals in Tunisia. Data were collected using a 24-item questionnaire distributed via Google Forms and in paper format and analyzed using Microsoft Excel.

Results: The study included 93 healthcare professionals: 51.6% pharmacists, 20.4% pharmacy technicians, and 12.9% nurses. Most participants had heard of AI (97.8%), with 52.7% reporting a moderate level of knowledge. ChatGPT was the most widely used chatbot (97.7%). The main professional uses were searching for drug information (55.8%), literature searches, and professional document writing (48.8% each). In terms of potential applications, 74.2% believed AI could help optimize inventory management, while 54.8% saw potential for its use in pharmaceutical prescription validation. Daily use was more common among pharmacists than among other healthcare professionals (42.6% vs. 7.5% ; $p < 0.001$). The main perceived benefits were time savings (89.25%), medication safety (79.57%), and pharmaceutical analysis (77.42%). Concerns centered on verifying Results (88.2%) and data confidentiality

(76.3%). Finally, 29% had received AI training, while 92.5% expressed a need for dedicated training.

Conclusion: AI was perceived as highly acceptable and useful. Its integration requires appropriate training and measures to ensure information reliability and data protection.

CO-158: AI-BASED TOXICOLOGICAL DIAGNOSTIC GUIDANCE : A COMPARATIVE STUDY OF FIVE TOOLS

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Introduction: Artificial intelligence (AI) is increasingly used to support clinical reasoning, yet its ability to orient intoxication diagnosis from limited clinical information remains insufficiently characterized.

Our aim is to compare the diagnostic accuracy of five AI tools in acute poisoning before and after enrichment with contextual, historical and laboratory data, and examine performance across case sources and toxic categories.

Methods: Fifty intoxication cases from clinical and forensic settings were submitted to five AI tools with clinical information alone, then with enrichment when available. Each tool generated three ranked hypotheses; correct orientation required identifying the confirmed toxicant or pharmacotoxicological class. Responses were scored 0-3 by hypothesis rank, yielding Top-1 (score=3) and Top-3 (score≥1) accuracy.

Results: Enrichment improved ordinal scores for all five tools (all adjusted $p < 0.01$). Top-1 accuracy rose from 4-20% to 37-46%, and Top-3 from 8-24% to 43-60%, with Gemini highest (60%) and Copilot lowest (42.9%) post-enrichment. Performance varied by toxicant, from 74.3%/82.4% (Top-1/Top-3) for chloralose/rodenticides to 0%/6.7% for opioids ($n=3$). Case provenance also mattered: in clinical-only conditions, forensic cases outperformed clinical ones for ChatGPT, DeepSeek and Gemini (all $p < 0.05$; e.g. Gemini 33.3% vs 3.4%); Copilot alone favored clinical cases. Enrichment narrowed most of these gaps, though Gemini remained higher in forensic cases (71.4% vs 51.7%) and Copilot in clinical cases (60.7% vs 19.0%).

Conclusion: Gemini achieved the highest overall accuracy after enrichment, while AI-based toxicological orientation improved substantially with clinically discriminative information, although performance varied across toxicants, tools, and contexts, suggesting that information quality, rather than model choice, was the primary driver of reliability.

CO-159: ESCACARE AND NURSING COMPETENCE IN PRESSURE INJURY MANAGEMENT

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Introduction: Pressure injuries (PIs) remain a persistent challenge in intensive care units (ICUs). Despite the availability of international guidelines, bedside nurses often struggle to manage these complex wounds due to high workloads and a lack of continuous clinical training.

Aims: We aimed to evaluate whether "EscaCare" a point-of-care clinical decision support system (CDSS) combining artificial intelligence (AI) image recognition with standard protocols could improve the theoretical, diagnostic, and therapeutic competencies of ICU nurses.

Methods: This multicenter, quasi-experimental study utilized a pre-test/post-test design. It was conducted between March and April 2025 and included 40 registered nurses working across four ICUs. We assessed their competencies before and after three weeks of utilizing the application in their daily practice. Data were analyzed using the exact McNemar test and Cohen's κ for effect sizes.

Results: Initially, 77.5% of the participants reported having no post-graduate PI training. Following the intervention, accurate recall of the clinical PI definition rose from 45.0% to 97.5% ($p < .001$). The nurses' ability to recognize the 4-stage EPUAP classification went from a mere 2.5% to a full 100% ($p < .001$). Indecision in selecting treatments was completely resolved: appropriate indications for charcoal dressings grew from 17.5% to 95.0% ($p < .001$), and the use of medical honey for biofilms increased from 22.5% to 72.5% ($p < .001$). Furthermore, 62.5% of the nurses felt the app reduced their cognitive burden, with timed observations confirming that usage took only 5 to 10 minutes per session.

Conclusion: EscaCare serves as a highly practical point-of-care tool. It effectively translates complex wound care guidelines into rapid bedside decisions, improving nursing competencies without disrupting the critical care workflow.

CO-160: PINPOINTING THE DAMAGE: DEEP LEARNING FOR DIABETIC RETINOPATHY LESION SEGMENTATION

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Introduction: Diabetic retinopathy (DR) remains a leading cause of preventable blindness, with accurate identification of retinal lesions (microaneurysms, hemorrhages, exudates, and soft exudates) being essential for grading disease severity and guiding treatment decisions. Automated segmentation of these lesions is hindered by their morphological heterogeneity, limited annotated data, and complex background noise inherent to fundus imaging.

Methods: We implemented a class-specific binary segmentation strategy using the DeepLabV3+ architecture, training an independent model for each lesion type (microaneurysms, hemorrhages, exudates, and soft exudates) to allow individualized parameter optimization. Preprocessing included targeted cropping to remove non-informative background regions and contrast-limited adaptive histogram equalization (CLAHE) applied to the L channel of the LAB color space to enhance local contrast. Data augmentation was restricted to rotation and horizontal flipping to preserve annotation integrity.

Individual model outputs were subsequently merged into a single composite segmentation map. The model was trained and evaluated on the Indian Diabetic Retinopathy Image Da

Results: The proposed method achieved an overall segmentation accuracy of 99%, with per-class accuracies exceeding 99.2% for all four lesion types (exudates: 99.39%; hemorrhages: 99.27%; microaneurysms: 99.79%; soft exudates: 99.77%). Corresponding F1 scores and intersection-over-union (IoU) values likewise exceeded 99%, outperforming previously reported state-of-the-art segmentation **Methods** on the same dataset.

Conclusion: A class-specific segmentation strategy combined with tailored preprocessing substantially improves the accuracy and reliability of automated DR lesion detection, supporting its potential application in scalable, standardized retinopathy screening programs.

CO-161: MACHINE-LEARNING MODELS IN FORECASTING LUNG CANCER CASES: DATA FROM NORTHERN TUNISIA CANCER REGISTRY

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Introduction: Cancer registries increasingly rely on statistical and AI-assisted, machine-learning models to project future cancer cases and guide health service planning. Lung cancer (LC), among the most frequent cancer types, is a priority for reliable forecasting to ensure scientific integrity. Our study aimed to analyze twelve forecasting **Methods** applied to long-term LC registry counts.

Methods: Using annual LC cases from the Northern Tunisia cancer registry (1994-2014), we evaluated twelve forecasting **Methods**, from simple trend lines to more advanced statistical and machine-learning-style models. Model accuracy was assessed using cross-validation, then verified through a strict holdout test over 2010-2014 window: each method had to forecast these years using only earlier data (1994-2009). The best-performing-method projected future case numbers through 2030, with uncertainty intervals from cross-validation errors.

Results: LC cases rose from 507 in 1994 to 1,294 in 2014 (average annual growth rate: 4.80%). Negative Binomial model gave the most accurate forecasts (Root-Mean-Squared-Error, RMSE=96.8 cases), closely followed by the Poisson model (RMSE=97.2); both outperformed simpler **Methods** such as Moving Average (RMSE=158). A Diebold-Mariano test comparing the Negative Binomial model to a naive baseline showed a lower error, though the difference was not statistically significant ($p=0.52, n=11$). Based on the Negative Binomial model, the projected LC cases were 1,472 in 2019 (95%CI: 1,290-1,653) and 2,391 in 2030 (95%CI: 2,209-2,572).

Conclusion: No forecasting method is universally superior; model selection required transparent, documented justification over fixed default choice. This reproducible pipeline illustrates the kind of transparency and integrity expected from medical research and publishing as AI-assisted analyses become more common.

CO-162: MACHINE-LEARNING FORECASTING MODELS FOR BREAST CANCER CASES: NORTHERN TUNISIA CANCER REGISTRY DATA

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Introduction: Breast cancer (BC) remains the most frequently diagnosed cancer among women in Tunisia, making accurate long-term forecasting essential for screening and treatment planning. As AI-assisted models increasingly inform cancer surveillance, transparent method choice is a matter of scientific integrity. Our study aimed to analyze twelve forecasting **Methods** for long-term BC registry counts.

Methods: Using the annual number of BC cases from the Northern Tunisia cancer registry (1994-2014), we compared twelve forecasting **Methods**, from simple trend lines to more advanced statistical and machine-learning-style approaches. Accuracy was assessed by cross-validation and confirmed with strict-holdout test (forecasting 2010-2014 using only 1994-2009 data). The most accurate method was used to project case numbers through 2030, with confidence intervals from cross-validation errors.

Results: BC cases increased from 433 in 1994 to 1,145 in 2014 (average annual growth:4.98%). A stacked ensemble model produced the lowest holdout error (RMSE=128.6 cases), marginally ahead of Negative Binomial (RMSE=128.7) and Poisson (RMSE=131.8) models, both outperforming simpler **Methods** such as Moving Average (RMSE=207.0). This advantage held consistently across all forecasts, from one to five years ahead. A Diebold-Mariano test comparing the selected model to a naive baseline showed a lower error, though not statistically significant ($p=0.13, n=11$). The resulting-projection were 1,748 cases for 2019 (95%CI:1,487-1,984) and 3,045 for 2030 (95%CI:2,783-3,280).

Conclusion: Even for a well-documented cancer-type, the most accurate method was not obvious in advance and required systematic testing rather than assumption. Making this evaluation explicit and reproducible builds the trust that clinicians and journal reviewers increasingly expected from AI-assisted forecasts.

CO-163: A DIAGNOSTIC FRAMEWORK FOR IRISOPATHY A METABOLIC NEURODEGENERATIVE COMPLICATION IN DIABETES

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Introduction: The relationship between diabetes and Alzheimer's disease (AD) has been widely studied. However, the specific cerebral mechanisms through which diabetic metabolic dysregulation induces independent neurological complications remain poorly characterized. While standard research primarily views diabetes as a non-specific risk factor for AD, its distinct

impact on brain structure through pathways independent of classical Alzheimer's pathology concerning subcortical damage has never been formally defined or computationally isolated. we introduce a new diagnostic framework for a complication named Irisopathy, which resembles Alzheimer's disease as a neurodegenerative condition, yet presents a fundamentally different pathological signature

Methods: The IRIS Project analyzed a cohort of 333 subjects via a 3-phase pipeline using NeuroDataSets v0.3.0: Phase 1: Neuroanatomical mapping (Spearman, Euclidean distance) identifying the structural convergence zone between diabetes and Alzheimer's disease. Phase 2: Metabolic profiling establishing the Diabetic Risk Score (SRD) via Z-score normalization of insulin and adiponectin, validated against CSF biomarkers (β 42 and Tau). Phase 3: RBF-SVM stratification (80/20 split) using SRD, age, and thalamic atrophy to divide patients into Healthy Controls ($n=107$), Asymptomatic High Risk ($n=135$), and Advanced Irisopathy ($n=91$).

Results: Phase 1 identified the thalamus as the primary structural convergence zone between diabetes and Alzheimer's disease, with a 95.52% similarity score, in contrast to the hippocampus which exhibited a divergence of 1.77 standard deviations confirming Irisopathy's distinct neuroanatomical signature. Phase 2 revealed a statistically significant correlation between the SRD and $A\beta$ 42 accumulation ($r=0.231, p<0.001$), confirming the metabolic-amyloid axis as the primary pathological pathway of Irisopathy. Phase 3 achieved a subclinical detection recall of 0.92 for Group B, successfully identifying and validating Clinically Asymptomatic High Metabolic Risk patients.

Conclusion: Diabetic Irisopathy represents a distinct, metabolically-driven neurological complication operating along a selective metabolic-amyloid axis that preferentially targets subcortical thalamic structures. This multimodal computational framework establishes a novel clinical paradigm for early subclinical interception, advancing personalized predictive medicine in diabetic populations worldwide.

CO-164: FEAR OF REPLACEMENT, NOT CAREER AVOIDANCE: AI-RELATED JOB INSECURITY AND SPECIALTY PERCEPTIONS AMONG

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Introduction: Artificial intelligence (AI) may affect medical specialties differently and shape students' perceptions of job security and career choice.

We examined the association between perceived AI-driven replacement of medical specialties and job-security concerns, and whether perceived AI-related disruption in radiology was associated with radiology career intention.

Methods: This single-center cross-sectional survey used convenience sampling and assessed beliefs about specialty replacement, job-security concerns, specialties perceived as most affected by AI, and radiology career intention. Categorical

associations were examined using Fisher's exact test and crude odds ratios. Ordinal differences were assessed using Mann–Whitney U tests with Cliff's delta. Multivariable logistic regression adjusted for sex and study cycle. Two-sided p values <0.05 were considered statistically significant.

Results: The study included 85 students (G1=70; G2=15). Overall, 25.6% believed that some specialties would be replaced by AI, and 33.7% reported concern about job security. Radiology was identified as highly affected by AI by 74.7% of students. Job-security concern was reported by 90.5% of students who believed in specialty replacement, compared with 14.8% of those who did not (OR=54.89, 95% CI 10.87-277.29; $p<0.001$). The association remained after adjustment (aOR=60.10, 95% CI 11.19-322.90; $p<0.001$), and the ordinal difference was large (Cliff's $\delta=0.823$). Radiology career intention did not differ significantly according to perceived disruption of radiology ($p=0.165$; $\delta=-0.177$).

Conclusion: Belief in specialty replacement was associated with job-security concerns. Perceived AI-related disruption in radiology was not associated with radiology career intention in this sample.

CO-165: TUNISIAN BIOMEDICAL AI/ML RESEARCH (2015–2025): A BIBLIOMETRIC SNAPSHOT

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Introduction: Artificial intelligence and machine learning (AI/ML) are increasingly shaping biomedical research. Tunisia has committed to digital health transformation and research modernization, yet the landscape of Tunisian-affiliated biomedical AI/ML research remains poorly documented. Mapping this scientific production may reveal AI-related research capacity development and emerging priorities for the national biomedical research community. This study aimed to provide a bibliometric snapshot of Tunisian-affiliated biomedical AI/ML publications, emphasizing publication trends, research domains, and national versus international journal distribution.

Methods: A PubMed search combined the MeSH term "Artificial Intelligence" with a Tunisia affiliation filter and was restricted to 2015–2025. Retrieved records ($n=320$) were manually screened by two independent reviewers. Eligible articles applied AI/ML methodologically or primarily addressed AI/ML in biomedical or health research. Editorials on AI in scientific writing and non-biomedical publications were excluded. Publications were classified by year, research domain, and journal type.

Results: Of 320 records, 204 met the eligibility criteria. Publications increased from 2 in 2015 to 65 in 2025, with the steepest growth after 2020. No eligible publications were identified in 2017 (Figure 1). Medical imaging predominated (41.7%), followed by neurology/neuroscience (12.7%), infectious diseases (7.8%), and genetics/bioinformatics (7.4%). Only 3 publications (1.5%) appeared in La "Tunisie Médicale", whereas 201 (98.5%) were published internationally. Figure 1. Annual trajectory of Tunisian AI/ML-related biomedical publications, 2015–2025.

Conclusion: Tunisian biomedical AI/ML research has expanded substantially, particularly since 2020, but remains overwhelmingly international. These findings provide a baseline for understanding Tunisia's AI/ML research landscape and support efforts to strengthen national research and editorial

capacity for responsible AI-related biomedical publishing.

CO-166: SEEING BEYOND THE HUMAN EYE: DEEP LEARNING FOR GLAUCOMA SCREENING IN FUNDUS IMAGES

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Introduction: Glaucoma remains a leading cause of irreversible blindness worldwide, often progressing silently until advanced, irreversible optic nerve damage has occurred. Automated screening tools based on fundus photography offer promise for earlier detection, yet existing deep learning models are frequently limited by biased datasets, small sample sizes, and restricted generalizability.

Methods: We designed a sequential deep architecture in which an EfficientNet-B0 backbone extracted local feature maps from fundus images, subsequently processed by Swin Transformer blocks to capture long-range spatial dependencies via window-based self-attention. The model was trained and tested on the JustRAIGS dataset (111,183 gradable fundus images), following data cleaning, contrast-limited adaptive histogram equalization (CLAHE) for illumination correction, and augmentation-based class balancing (rotation and flipping) to correct for referable glaucoma underrepresentation. The final dataset comprised 60,000 balanced images (48,000 for training, 6,000 for testing across each class configuration).

Results: The proposed CNN-Swin Transformer model achieved an area under the curve (AUC) of 98% and an overall classification accuracy of 98% on the test dataset, outperforming several previously reported single-architecture models. Gradient-weighted Class Activation Mapping (Grad-CAM) visualization confirmed that the hybrid model, unlike the CNN alone, effectively localized diagnostically relevant retinal regions beyond the optic disc.

Conclusion: Combining CNN-based local feature extraction with Swin Transformer global attention substantially improves automated glaucoma detection accuracy and interpretability, supporting its potential integration into clinical screening workflows.

CO-167: ARTIFICIAL INTELLIGENCE USE, DEPENDENCE, AND TRAINING NEEDS IN HOSPITAL PRACTICE

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Introduction: Artificial intelligence (AI) is increasingly used in hospital practice, raising questions about professional reliance, service disruption, and training needs.

Aim: To assess professional AI use, perceived dependence, consequences of AI unavailability, knowledge, and training

needs among hospital physicians and pharmacists.

Methods: A cross-sectional questionnaire survey was conducted in August 2026 at Farhat Hached University Hospital, Sousse, Tunisia. Data were analyzed using chi-square or Fisher's exact tests, Mann-Whitney U tests, and multivariable logistic regression, as appropriate. Statistical significance was set at $p < 0.05$.

Results: A total of 121 participants were included; 90.1% were physicians and 76.9% were women. Overall, 88.4% reported professional AI use, mainly for information retrieval (79.4%), summarization or drafting (75.7%), and scientific research (63.6%). Perceived dependence was low overall (median score 1.0/4; IQR 0.6–1.4). AI unavailability was reported by 62.9% of users with evaluable data; among them, 51.5% reported increased task completion time and 43.9% significant stress. Frequent AI use was higher among men than women (69.2% vs 44.4%, $p = 0.028$). In multivariable analysis, male sex (aOR=3.43; 95% CI 1.28–9.17; $p = 0.014$) and previous AI training (aOR=2.52; 95% CI 1.04–6.12; $p = 0.041$) were independently associated with frequent use. AI users had higher knowledge scores than non-users (median 8 vs 7/10; $p < 0.001$). Overall, 68.6% had received no previous AI training and 83.5% favored secure institutional access.

Conclusion: Professional AI use was widespread, while perceived dependence remained limited. AI downtime had measurable professional and psychological consequences. Differences in usage patterns and knowledge support structured AI training and secure institutional access.

CO-168: HIGH INTEREST, LIMITED MASTERY: ARTIFICIAL INTELLIGENCE LITERACY AND TECHNICAL FAMILIARITY AMONG MED

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Introduction: Artificial intelligence (AI) is increasingly integrated into healthcare, requiring future physicians to understand its principles, limitations, and terminology.

Aim: To assess AI literacy and technical familiarity among medical students and compare first-cycle (G1) and second-cycle (G2) students.

Methods: This single-center cross-sectional survey used convenience sampling and a pretested, self-administered French-language questionnaire. Four five-point Likert items assessed interest in AI, self-reported basic knowledge, understanding of computational principles, and understanding of limitations. Technical familiarity was measured by recognition of 11 AI-related concepts. G1 and G2 were compared using Mann-Whitney U tests with Cliff's delta. Associations were examined using Spearman correlations and exploratory multivariable logistic regression. Two-sided p values < 0.05 were considered significant.

Results: The study included 85 students (G1=70; G2=15), of whom 74.1% were women. Interest in AI was reported by 75.9%, basic knowledge by 68.7%, understanding of computational

principles by 22.9%, and understanding of limitations by 42.2%. G2 students reported greater basic knowledge ($p = 0.007$; $\delta = 0.44$) and understanding of limitations ($p = 0.008$; $\delta = 0.44$). The number of recognized concepts correlated with understanding of AI principles ($p = 0.750$; $p < 0.001$). Each additional recognized concept was associated with higher odds of reporting an understanding of AI principles (aOR=2.20, 95% CI 1.52-3.17; $p < 0.001$).

Conclusion: Medical students expressed strong interest in AI but reported limited conceptual understanding. Undergraduate AI education should address core principles, limitations, and critical appraisal.

CO-169: KNOWLEDGE GAPS AND ETHICAL OVERSIGHT OF ARTIFICIAL INTELLIGENCE IN MEDICAL WRITING

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Introduction: The rapid adoption of generative artificial intelligence (AI) in scientific writing has outpaced the development of formal training and ethical guidance for its users. Among anesthesiologists-intensivists (AIs), who increasingly rely on these tools, the extent of ethical preparedness and the disclosure practices surrounding AI use remain largely unexplored. This study aimed to assess the training gaps, disclosure behaviors, and perceived need for oversight of generative AI use in medical writing among Tunisian AIs.

Methods: A descriptive cross-sectional study was conducted using an anonymous electronic questionnaire (Google Forms), distributed to Tunisian anesthesiologists-intensivists of all grades (residents, hospital-university assistants, associate professors, and professors), practicing in the public or private sector.

Results: Fifty-eight responses were collected. Only 17% of respondents had ever received training on the ethical framework of AI use in medical research, a gap most pronounced among residents (88% untrained) and hospital-university assistants (84% untrained). Among the 69% who had already used AI for medical writing, only 33% reported always disclosing this use, 20% rarely or never disclosed it, and 8% were unaware that disclosure was required. Despite this, 96% of respondents believed AI use should be regulated, either systematically (60%) or in specific circumstances (36%), and 69% believed AI posed a certain long-term risk to writing skills. When asked which aspects of a future training program interested them most, the ethical framework and disclosure requirements ranked highest (74%), ahead of practical tool use (71%), data protection (48%), and associated risks (41%). Overall, 88% expressed interest in structured training, regardless of prior training status.

Conclusion: A substantial gap exists between the widespread use of generative AI in medical writing and the ethical preparedness of Tunisian anesthesiologists-intensivists, particularly among trainees. The near-unanimous demand for oversight and structured training, especially on ethical and disclosure standards, underscores the urgency of implementing formal guidelines and educational programs before AI use becomes further entrenched in medical scientific writing.

CO-170: GENERATIVE ARTIFICIAL INTELLIGENCE USE AMONG MEDICAL EDUCATORS: PATTERNS AND EDUCATIONAL APPLICATION

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Introduction: Generative artificial intelligence (AI) is rapidly entering academic environments and is increasingly used to support teaching and scholarly activities. However, the extent to which medical educators have incorporated these tools into their routine practices and the ways in which they are used remain insufficiently characterized. In this context, we conducted a study to assess the extent, frequency, and patterns of generative artificial intelligence use among medical educators, with a particular focus on its applications in teaching and academic activities.

Methods: We conducted a cross-sectional survey among 56 medical educators using an anonymous structured questionnaire. The survey explored the frequency of AI use, the types of AI tools used, the academic and educational tasks supported by AI, the use of multiple AI tools for the same task, and the perceived impact of AI on teaching preparation.

Results: Among participants, 46.4% reported using AI sometimes, 46.4% often, and 7.1% very often in their university activities. AI was used across several academic tasks, including information retrieval, text correction and reformulation, translation, scientific writing, and preparation of educational materials. Multiple AI tools were used for the same task by a substantial proportion of respondents, with 23.2% reporting frequent and 5.4% very frequent use. The reported applications included comparing responses, improving wording, obtaining alternative perspectives, searching for complementary references, and selecting the most appropriate educational material. AI was also used in the preparation of teaching materials and assessment questions. Notably, all respondents reported some reduction in teaching preparation time, with 48.2% describing this reduction as substantial and 46.4% as moderate.

Conclusion: Generative AI has already become an integrated component of the academic practices of medical educators. Its use extends beyond simple information retrieval to encompass content production, reformulation, translation, assessment development, and educational resource selection. The perceived reduction in preparation time suggests that AI is increasingly viewed as a practical teaching support tool. These findings highlight the rapid transition of generative AI from an emerging technology to a routine component of medical educators' academic workflows.

CO-171: MEDICAL EDUCATORS' PERCEPTIONS AND CONCERNS REGARDING GENERATIVE ARTIFICIAL INTELLIGENCE

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Introduction: While generative artificial intelligence (AI) offers new opportunities for medical education, it also raises concerns regarding reliability, academic integrity, privacy, and inappropriate reliance; therefore, the objective of this study is to assess medical educators' perceptions of generative AI, its perceived benefits, and the main challenges and barriers

associated with its use.

Methods: A cross-sectional survey was conducted among 56 medical educators using an anonymous structured questionnaire. The survey explored perceived educational benefits, reliability, verification practices, exposure to inaccurate information, perceived risks, and the need for institutional guidance.

Results: Three-quarters of participants (75%) agreed that AI improved the quality of their teaching materials. However, 76.8% reported having identified medically inaccurate information generated by AI, and 66.1% had encountered incorrect or nonexistent references. Most respondents (76.8%) strongly agreed that AI-generated medical answers should always be verified. The main perceived barriers were the cost of paid versions (75%), risk of medical errors (62.5%), incorrect or fabricated references (62.5%), patient-data protection (60.7%), and ethical concerns related to academic integrity and plagiarism (60.7%). Excessive student dependence on AI was considered a major concern by 51.8% of participants. Furthermore, 58.9% strongly agreed that AI use in medical education requires a clear institutional framework.

Conclusion: Medical educators recognize the educational value of generative AI while remaining aware of substantial limitations and risks. Responsible integration should therefore be supported by institutional guidance, educator training, and systematic verification of AI-generated medical content.

CO-172: PREVALENCE AND DETERMINANTS OF UNVERIFIED ARTIFICIAL INTELLIGENCE USE AMONG ANESTHESIA STUDENTS

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Introduction: Anesthesia students use generative artificial intelligence (AI) for academic and clinical tasks. The safety of this practice rests on systematic verification of the content before it informs care. This study estimated the prevalence of AI use and identified factors associated with unverified use.

Methods: We conducted a single-center cross-sectional study at the École Supérieure des Sciences et Techniques de la Santé de Tunis. All 99 students of the three-year program answered an anonymous self-administered 12-item questionnaire. Responses were declarative and may differ from actual behavior. We examined factors associated with unverified use by multivariable logistic regression, adjusted for year of training.

Results: All students reported using AI, 100% (95% CI 96.3–100.0), and 88.9% used it on the ward for clinical information. Unverified use was reported by 80.8%. Systematic verification was reported by 29.2% of first-year and 9.1% of third-year students ($p = 0.033$ for trend). AI errors had been personally identified by 83.8%. Trust in AI was independently associated with unverified use, adjusted OR 3.10 per point (95% CI 1.34–7.21), $p = 0.008$, whereas personal identification of AI errors was not, adjusted OR 1.78 (95% CI 0.72–4.42), $p = 0.212$. Formal training had been received by 3.1%; 99.0% requested it.

Conclusion: AI use was universal, clinical and largely unverified. Trust accounted for the failure to verify, whereas the experience of AI errors did not. Training directed at verification may therefore be more useful than exposure to AI errors. Larger multicenter studies are needed to confirm this.

CO-173: SOFT VOTING ENSEMBLE LEARNING APPROACH FOR PURE-TONE AUDIOMETRY INTERPRETATION

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Introduction: Hearing loss is a public health problem; it requires a pure-tone audiometry for diagnostic and therapeutic management. Worldwide, we lack ENT specialists and interpretation of audiometry can be challenging for no-ENT doctors. Voting Ensemble is a supervised deep learning technique that combines the predictions of several individual models to generate a single, more accurate and robust final prediction.

Methods: A Retrospective study was conducted using pure-tone audiometry's images collected from the ENT Department of Charles Nicolle Hospital in Tunis. These images were divided into four categories: normal hearing, conductive hearing loss, sensorineural hearing loss and mixed hearing loss. Then it was divided into three subsets: 80% for training, 10% for validation, and 10% for testing. Data augmentation techniques were used to improve generalization. A soft voting ensemble learning approach was implemented using 3 models: MobileNetV3, DenseNet121 and EfficientNetV2B0.

Results: Our dataset contains 1104 images: 276 normal hearing, 146 conductive hearing loss, 328 sensorineural hearing loss and 354 mixed hearing loss. After training each model for 10 epochs, we obtain an accuracy of 82.61% for MobileNetV3, 81.74% for DenseNet121 and 73.91% for EfficientNetV2B0, the soft voting ensemble accuracy was 86.09%.

Conclusion: This study demonstrates that soft voting ensemble learning approach in Convolutional Neural Networks, using multiple small models, give a better accuracy than each of those small models trained for few epochs. And thus can help classify medical images such as audiometries.

CO-174: EVALUATION OF SELF HOSTED AI MODELS FOR PHENOTYPIC INTERPRETATION OF ANTIMICROBIAL SUSCEPTIBILITY

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Introduction: Susceptibility reports are interpreted manually at the bedside. Recognising a resistance phenotype, such as extended-spectrum beta-lactamase, hyperproduced AmpC cephalosporinase or carbapenemase production, governs antibiotic choice, yet relies on referential rules rarely at hand. Sending patient documents to commercial services raises an additional confidentiality concern.

Aim. To measure the accuracy of a self-hostable pipeline separating perception, a vision model reading the photograph, from interpretation, a deterministic engine sourced from CA-SFM/EUCAST 2025.

Methods: Retrospective study of 168 reports photographed during infectious-diseases consultations at two laboratories, collected July 2026: 30 species, 107 instrument printouts, 61 other formats, no quality-based exclusion. Manual cell-by-cell transcription gave 2547 lines and 2455 standard-breakpoint

categories; phenotype references were engine-derived, with independent validation by two senior microbiologists, blinded to tool output, ongoing on the same corpus. Each photograph was read three times by an 8-billion-parameter open-weight model, majority-voted, then interpreted. Errors were assessed over the union of reference and output antibiotics, counting omissions and inventions.

Results: Species identification was correct for 168/168. Per-cell reading error was 6.9%; 58.3% of reports were read without a single error; three resistant molecules were read as susceptible. Phenotype agreement reached 164/168 (97.6%). Median reading time, 12.5 seconds. The Apache-2.0 model performed similarly.

Conclusion: A self-hosted open-weight vision model coupled with a deterministic CA-SFM/EUCAST rule engine achieved high agreement with the study reference for species identification and phenotype assignment. However, transcription errors, including resistant-to-susceptible misclassifications, preclude autonomous clinical use. External validation across laboratories and independent expert validation of the engine are required before deployment as clinician-supervised decision support.

CO-175: A CONTROLLED COMPARISON ON 168 ANTIMICROBIAL SUSCEPTIBILITY REPORTS BETWEEN FRONTIER AND SMALL MODEL

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Introduction: Evaluations of vision-language models in medicine usually compare size. Whether a clinically usable **Conclusion** comes from the model's reasoning or from an explicit referential layer is rarely isolated, although it decides what a hospital deploys.

Aim. To separate the contribution of model capacity from that of a deterministic CA-SFM/EUCAST rule engine in the recognition of phenotypic resistance patterns.

Methods: 168 manually transcribed reports served as reference. Three vision models, one 8-billion-parameter open-weight and two frontier, read each report under an identical prompt in a single pass. Each model also named the suspected resistance mechanisms, from an imposed vocabulary of 23 terms, only after reading the table, so that naming could not influence transcription. Each reading then passed through the same engine, which also produced the phenotype reference.

Results: Reading error ranged from 4.2% to 14.4%. Unaided verdicts were correct for 56.0%, 61.9% and 73.2%, not ordered by size: the open-weight model outperformed a frontier model reading three times better. Passed through the engine, the same readings reached 94.6% to 100%. The best unaided verdict missed 55 mechanism-compatible phenotypes, 27 extended-spectrum beta-lactamase-compatible and 15 carbapenemase-compatible.

Conclusion: Across three multimodal models, unaided interpretation showed substantial, non-monotonic variability not predicted by model scale. A deterministic CA-SFM/EUCAST rule engine markedly improved agreement with the study reference. These findings support a modular architecture in which artificial intelligence performs structured data extraction, while transparent, versioned and independently validated rules perform microbiological interpretation. Because

the reference derived from the same engine, external expert and microbiological validation is required before clinical deployment.

CO-176: HOW EVALUATION CHOICES CHANGED THE REPORTED ACCURACY OF A CLINICAL AI TOOL

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Introduction: Reported accuracies of medical artificial-intelligence tools are seldom accompanied by the evaluation choices that produced them. While developing a tool that reads antimicrobial susceptibility reports, we repeatedly found that an apparent failure of the model was a failure of our own measurement, always towards a cleaner result.

Aim. To quantify how much specific evaluation choices change the reported performance of the same tool, on a fixed dataset with fixed model outputs.

Methods: 168 photographs of susceptibility reports were transcribed manually, cell by cell, giving 2455 reference categories, and read by five model configurations totalling 12754 lines. Each evaluation choice was varied while dataset, model outputs and reference remained unchanged, so any difference is attributable to the measurement alone. Comparisons are therefore paired on identical outputs.

Results: Comparing free-text **Conclusions** instead of asserted mechanism sets cost 4.2 points, 92.3% against 96.4%. An empty reading counted as agreement inflated a baseline optical engine from 77.8% to 88.9% (18 reports), no mechanism being the correct answer for two thirds of the corpus. Opposite row-flattening rules fabricated 19 errors on the 87 amoxicillin-clavulanate cells, promoting it to worst-read molecule. Discarding labels our normaliser missed reported one model at 9.6% instead of 6.9%. Adding recurrent model labels to our registry introduced cefazolin, absent from all 2547 lines.

Conclusion: Evaluation choices moved reported accuracy by up to eleven points, in both directions, with the model unchanged. Reporting the flattening rule, and the handling of unparsed and empty outputs, should be minimal requirements before a susceptibility-reading tool is trusted for prescribing.

MALADIES INFECTIEUSES

CO-177: BEYOND INFECTION: NON-INFECTIOUS DIAGNOSES IN AN INFECTIOUS DISEASES DEPARTMENT

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Introduction: The broad and cross-disciplinary scope of infectious diseases **Results** in a wide spectrum of nonspecific clinical presentations, making the distinction between infectious and non-infectious conditions challenging at the time of hospital admission. Consequently, patients may be admitted to infectious diseases departments despite a subsequent diagnosis of a non-infectious condition. This study aimed to characterize the spectrum of non-infectious conditions

requiring hospitalization in an infectious diseases department.

Methods: We conducted a retrospective descriptive study of patients admitted with a final diagnosis of a non-infectious condition to the Infectious Diseases Department of Rabta Hospital over a 5-year period (January 2021–December 2025).

Results: A total of 127 patients were included, corresponding to a mean of 25 admissions annually. The mean age was 50 years (range, 16–87 years), and the male-to-female ratio was 1.2 (68/59). Most patients were Tunisian (125/127, 98%). Patients were referred from the emergency department (60/127, 47%), outpatient clinics (55/127, 43%), and other hospital departments (12/127, 9%). The median length of hospital stay was 11 days (range, 1–46 days). The most frequent presenting manifestations were constitutional symptoms (31/127, 24%), prolonged fever (22/127, 17%), low back pain (14/127, 11%), headache (13/127, 10%), skin rash (12/127, 9%), and altered mental status (9/127, 7%). The most common final diagnoses were chronic inflammatory diseases (26/127, 20%), neurological disorders (19/127, 14%), hematologic malignancies, predominantly lymphoma (18/127, 14%), solid malignancies (16/127, 12%), and non-infectious granulomatous diseases (10/127, 7%).

Conclusion: Non-infectious conditions represent a substantial proportion of hospitalizations in an infectious diseases department. Malignancies and systemic inflammatory disorders were the leading alternative diagnoses. These findings underscore the importance of maintaining a broad differential diagnosis when evaluating patients with suspected infections. Improving clinicians' awareness of non-infectious conditions that mimic infectious diseases may help optimize diagnostic pathways, reduce unnecessary hospitalizations, and improve healthcare resource utilization.

CO-178: TUBERCULOUS SPONDYLODISCITIS VS BRUCELLAR SPONDYLODISCITIS: WHAT ARE THE DIFFERENCES?

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Introduction: Infectious spondylodiscitis involves the intervertebral disc and adjacent vertebrae. Tuberculosis and brucellosis remain major etiologies in developing countries. The aim of this study is to compare the epidemiological, clinical, biological, and radiological characteristics of tuberculous and brucellar spondylodiscitis.

Methods: We conducted a cross-sectional study (2011-2025) in the Rheumatology and Infectious Diseases Departments of Tahar Sfar University Hospital, Mahdia, including hospitalized patients diagnosed with tuberculous or brucellar spondylodiscitis. Patients were divided into tuberculous (TSPD) and brucellar (BSPD) groups. Epidemiological, clinical, biological, and radiological features were compared.

Results: Overall, 35 patients were enrolled and divided into two groups: TSPD group (20 patients, 57.1%) and BSPD group (15 patients, 42.9%). No significant differences were observed regarding age, sex, rural origin, animal exposure, socioeconomic status, or comorbidities. Raw milk exposure was significantly more frequent in the TSPD group ($p=0.036$). Cruralgia was exclusively observed in the TSPD group ($p=0.026$). Imaging data revealed that soft tissue abscesses were significantly more frequent in the TSPD group ($p=0.037$), whereas vertebral endplate erosion was significantly more common in the BSPD group ($p=0.036$). Thoracic spine involvement was observed

exclusively in the TSD group ($p = 0.001$), whereas lumbar involvement was significantly more frequent in the BSPD group ($p = 0.006$). Multifocal involvement was significantly more common in the TSPD group ($p = 0.036$). Most patients had a favorable outcome with appropriate treatment.

Conclusion: Tuberculous and brucellar spondylodiscitis show distinct clinical and radiological patterns that may contribute to etiological diagnosis and guide management.

CO-179: DIABETES MELLITUS AND INVASIVE MANAGEMENT OF RENAL ABSCESES: IS THERE AN ASSOCIATION?

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Introduction: Diabetes mellitus is a recognized risk factor for complicated urinary tract infections and may influence the therapeutic management of renal abscesses, particularly the need for invasive procedures.

The aim of our study was to assess the association between diabetes mellitus and the need for invasive management in patients with renal abscesses.

Methods: We conducted a retrospective study including patients hospitalized for renal abscesses. Patients were stratified according to the presence or absence of diabetes mellitus. Invasive management was defined as percutaneous and/or surgical drainage. Therapeutic characteristics were compared between the two groups.

Results: A total of 65 patients were included, including 39 patients with diabetes (60.0%) and 26 without diabetes (40.0%). Invasive management was performed in 54 patients (83.1%). Diabetic patients were more likely to undergo an invasive procedure than non-diabetic patients (89.7% vs. 69.2%, respectively; $p = 0.05$). Percutaneous drainage was significantly more frequent among diabetic patients (87.2% vs. 64.3%; $p = 0.038$). In contrast, the use of surgical drainage did not differ significantly between the two groups (15.4% vs. 10.7%; $p = 0.72$).

Conclusion: Diabetes mellitus was associated with a higher rate of invasive management, particularly percutaneous drainage, in patients with renal abscesses. These findings suggest that diabetic status may influence therapeutic decision-making in this setting.

CO-180: HIV/AIDS TRANSMISSION ROUTES KNOWLEDGE AMONG GENERAL POPULATION IN CENTRAL TUNISIA

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Introduction: Adequate knowledge of HIV transmission routes is essential for effective prevention. Despite global awareness campaigns, misconceptions persist. This study aimed to assess HIV/AIDS knowledge and awareness of actual transmission routes among participants attending community outreach sessions in Monastir, Tunisia.

Methods: A cross-sectional survey was conducted during community outreach sessions organized by the Department of Preventive and Community Medicine of Fattouma Bourguiba University Hospital, Monastir, across several delegations and

faculties between 2023 and 2025. Informed consent was obtained before questionnaire administration. Data were analyzed using SPSS.

Results: Among 330 participants, the median age was 25.0 years (IQR [23.0–43.0]); 159 (56.4%) were female. Only 191 (60.4%) knew what AIDS refers to, with women more likely to know than men (70.7% vs. 51.3%, $p=0.001$). Overall, 58.9% considered AIDS a serious disease. Sexual transmission was well recognized: unprotected intercourse (92.3%) and multiple sexual partners (89.2%). Most participants also identified contaminated blood transfusion (91.1%), non-sterilized medical needles (90.2%), needle-sharing among drug users (91.0%), contaminated barber razors (81.4%), tattooing/piercing tools (83.0%), and biological fluid projection (75.4%) as transmission routes. Non-sterilized dental instruments were recognized by 61.9%. Breastfeeding was least recognized, with 38.9% denying and 15.7% uncertain.

Conclusion: Knowledge of common HIV transmission routes was generally satisfactory, but gaps remain, particularly regarding breastfeeding and biological fluid projection. Targeted health education should reinforce all transmission modes, including perinatal and occupational routes, in community sensitization programs in central Tunisia.

CO-181: ACUTE KIDNEY INJURY IN SEVERE PLASMODIUM FALCIPARUM MALARIA

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Introduction: Acute kidney injury (AKI) is one of the most life-threatening organ complications of severe Plasmodium falciparum malaria, carrying high mortality rates in endemic settings. This study aimed to characterize the epidemiological, clinical, therapeutic and outcome features of malaria-associated AKI in two referral hospitals in Nouakchott, Mauritania.

Methods: A retrospective cross-sectional observational study was conducted at the National Hospital Center (CHN) and the Amitié Hospital Center (CHA) of Nouakchott, over two inclusion periods (October–December 2024 and October–November 2025). All hospitalized patients with confirmed severe P. falciparum malaria complicated by AKI, without pre-existing chronic kidney disease, were enrolled. Data were analyzed using SPSS 25. Bivariate analysis was performed to identify factors associated with renal recovery.

Results: Fifty patients were included. The mean age was 33.26 years (range: 3–67), with a marked male predominance (M/F ratio = 2.57). Low socioeconomic status was identified in 72% of cases. The predominant clinical features at admission were fever (100%), pallor (98%), headache (98%), dehydration (94%), and jaundice (66%). The most frequent WHO severity criteria were cerebral malaria (36%) and severe anemia (34%). Anemia was present in 86% of patients and thrombocytopenia in 44%. Serum creatinine exceeded 100 mg/L in 48% of cases. Acute tubular necrosis (ATN) was the predominant pathophysiological mechanism (51.9%). According to KDIGO staging, 74% of patients had stage 3 AKI. Intravenous artesunate was administered to all patients. Renal replacement therapy (RRT) was required in 44% of cases, with the main indications being uremic syndrome (9 cases), anuric AKI (6 cases), and hyperkalemia (5 cases). Complete renal recovery was achieved in 60% of patients, partial recovery in 20%, and progression to chronic kidney disease occurred in 14% of cases. Overall mortality was 6%. On bivariate analysis, oligo-anuria ($p < 0.001$), coma ($p < 0.001$), cerebral malaria ($p = 0.004$), KDIGO stage 3 ($p = 0.034$), and

RRT requirement ($p = 0.020$) were significantly associated with absence of renal recovery.

Conclusion: Malaria-associated AKI predominantly affects young adults from disadvantaged socioeconomic backgrounds and typically presents at an advanced stage (KDIGO 3). ATN is the principal histopathological substrate. Renal and vital prognosis hinges on early diagnosis, prompt artesunate initiation, and timely access to dialysis. The non-negligible rate of chronicity (14%) underscores the need for systematic nephrology follow-up after the acute phase.

CO-182: DENGUE FEVER IN MAURITANIA: EPIDEMIOLOGICAL AND BIOLOGICAL PROFILE OF 275 CASES

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Introduction: Dengue is a mosquito-borne arboviral disease of major global public health importance. While historically considered a low-risk area, Mauritania has seen confirmed local circulation of *Aedes aegypti* and documented dengue outbreaks since 2014. National data on circulating serotypes, biological features, and epidemiological patterns remain limited. This study aimed to describe the epidemiological and biological characteristics of confirmed dengue cases in Mauritania.

Methods: A prospective, cross-sectional descriptive and analytical study was conducted at the National Institute for Public Health Research (INRSP) in Nouakchott over a six-month period (July–December 2025), coinciding with peak dengue transmission season. Patients meeting the national suspected-case definition (acute fever $\geq 38^{\circ}\text{C}$ plus at least two associated signs) with blood samples sent for RT-PCR confirmation were included. Sociodemographic, clinical, and biological data were collected via a standardized notification form. Positive samples underwent serotyping. Statistical analysis used SPSS v27.0, including bivariate analysis (chi-square/Fisher's exact test) and binary logistic regression for significant variables ($p < 0.20$).

Results: A total of 275 patients were included, with a male predominance (sex ratio 1.86) and a mean age of 31.9 years. Livestock traders were the most represented occupational group (46.9%), and 30% of patients originated from Nouakchott-Ouest province. Consultations peaked in October (78.9%). The most common clinical signs were high-grade fever, headache, and retro-orbital pain, often accompanied by vomiting; hemorrhagic and cutaneous manifestations were also observed. RT-PCR confirmed dengue in 54 patients (19.6%), with DENV-2 as the exclusive circulating serotype among confirmed cases. Case fatality was 2.2% (6/275). Bivariate analysis found no significant association between confirmed dengue and sex, age group, or occupation, but revealed a significant association with residence in Nouadhibou province (OR 4.71, 95% CI 1.77–12.53, $p = 0.003$).

Conclusion: This study confirms active circulation of dengue in Mauritania, dominated by serotype DENV-2, with polymorphic clinical presentation and marked spatiotemporal clustering, notably a strong geographic association with Nouadhibou province. These findings underscore the need to strengthen epidemiological and biological surveillance of arboviruses, improve diagnostic capacity, and promote early, adapted management of suspected cases.

CO-183: STAPHYLOCOCCAL BACTEREMIA IN PEOPLE WHO INJECT DRUGS: A 13-YEAR RETROSPECTIVE STUDY

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Introduction: Staphylococcal bacteremia in people who inject drugs (PWID) is associated with a high risk of infective endocarditis and metastatic infections. Early diagnosis and appropriate management are essential to prevent severe complications.

Methods: We conducted a retrospective descriptive study of PWID hospitalized for staphylococcal bacteremia at La Rabta Hospital between January 2010 and December 2022.

Results: twenty patients were included (sex ratio=19; mean age, 39 ± 10 years). Injected substances were mainly buprenorphine and pregabalin ($n=17$; 85%). Positive viral serologies included hepatitis C ($n=15$; 75%), hepatitis B ($n=5$; 25%), and HIV ($n=1$; 5%). Joint ($n=7$; 35%) and respiratory manifestations ($n=6$; 30%) predominated. The portal of entry was endovascular in 90% ($n=18$). Metastatic infections occurred in 95% ($n=19$), mainly pulmonary (80%), cardiac (50%), and osteoarticular (50%). Infective endocarditis was diagnosed in 50% ($n=10$), involving the tricuspid valve in 80% ($n=8$). *Staphylococcus aureus* was isolated in 90% ($n=18$), including two methicillin-resistant strains; coagulase-negative staphylococci accounted for 10% ($n=2$). Empirical therapy mainly consisted of oxacillin plus gentamicin ($n=11$; 55%). The mean time to adequate antibiotic therapy was 5.1 days. Treatment was modified in 50% ($n=10$), with a mean duration of 59 days. Surgical management was required in 15% ($n=3$): valve replacement ($n=2$) and spinal immobilization ($n=1$). Mortality was 10% ($n=2$).

Conclusion: Staphylococcal bacteremia in PWID is frequently associated with endovascular infection, infective endocarditis, and metastatic foci. The high burden of viral coinfections and deep-seated infections highlights the need for systematic infectious assessment and early, multidisciplinary management.

CO-184: FACTORS ASSOCIATED WITH INFECTIVE ENDOCARDITIS IN STAPHYLOCOCCUS AUREUS BACTEREMIA: A 13-YEAR RETROS

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Introduction: Infective endocarditis (IE) is a severe complication of *Staphylococcus aureus* bacteremia (SAB). Early identification of patients at increased risk of IE may optimize diagnostic and therapeutic management.

Methods: We conducted a retrospective study of patients hospitalized for SAB at La Rabta Hospital between January 2010 and December 2022. Clinical, microbiological, and laboratory characteristics were compared between patients with and without IE. Factors associated with IE were assessed using univariate and multivariate analyses.

Results: Among 58 patients with SAB, IE was diagnosed in 23 (39.7%). In-hospital mortality was 12.1% ($n=7$). A cardiac murmur was more frequent in patients with IE than in those without IE (65.2% vs. 22.9%; OR=6.33, 95% CI [1.92–20.84]; $p=0.002$). Tachycardia was also more frequent in the IE group (87.0% vs. 54.3%; $p=0.020$). Three distinct sets of positive blood

cultures were more frequent in patients with IE (60.9% vs. 31.4%; OR=3.41, 95% CI [1.12–10.37]; $p=0.027$). Intravenous drug use was not significantly associated with IE ($p=0.147$). Methicillin-resistant *Staphylococcus aureus* was not associated with IE (8.7% vs. 8.6%; $p=1.00$). Symptom duration before consultation was not associated with IE ($p=0.61$). On multivariate analysis, a cardiac murmur remained independently associated with IE (adjusted OR=4.10, 95% CI [1.16–14.50]; $p=0.029$).

Conclusion: IE was frequent among patients with SAB. A cardiac murmur and multiple distinct positive blood cultures were associated with IE, supporting systematic cardiovascular assessment and echocardiographic evaluation in SAB. These findings may help clinicians identify patients requiring evaluation for IE and timely transesophageal echocardiography when clinically indicated.

CO-185: PULMONARY TUBERCULOSIS AT TLEMEN UNIVERSITY HOSPITAL: TWO-DECADE EPIDEMIOLOGICAL TRENDS (2001–2022)

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Introduction: Pulmonary Tuberculosis (TB) remains a chronic, contagious infectious disease and a major global public health challenge. It is also a notifiable disease in Algeria, where it continues to pose significant challenges for surveillance and control despite advances in the National Tuberculosis Control Program. This study aimed to describe the epidemiological profile and temporal trends of pulmonary TB cases reported at the University Hospital Center of Tlemcen over more than two decades.

Methods: A retrospective descriptive study was conducted using notifiable disease records from 2001 to 2022. Sociodemographic, temporal, and clinical data were extracted and analyzed using SPSS version 17.0. Variables included sex, age, year and month of notification, and hospital department.

Results: A total of 1775 pulmonary TB cases were reported. The mean age was 37.1 ± 16.5 years, with a male predominance (59.4%). Most cases were reported by the Pneumology Department (92.3%). A declining trend was observed from 139 cases in 2001 to 49 in 2022, with a marked decrease during the COVID-19 pandemic (27 cases in 2020 and 3 in 2021), followed by a recovery in 2022. Notifications peaked during spring (March–May), accounting for 29% of cases, with a secondary peak in July. An additional 130 cases were recorded in 2023–2024, confirming pulmonary TB as the second most frequently reported notifiable disease at Tlemcen University Hospital.

Conclusion: Pulmonary tuberculosis remains a significant public health issue at the University Hospital Center of Tlemcen, particularly affecting the young and economically active population. The marked decrease in notifications during the COVID-19 pandemic may reflect underreporting rather than a true decline in disease occurrence. Strengthening surveillance, improving case notification, and reinforcing coordination with public health institutions are essential to reinforce TB control and contribute to the WHO End Tuberculosis strategy in Algeria.

CO-186: INFECTIOUS COMPLICATIONS IN CHRONIC HEMODIALYSIS : EPIDEMIOLOGICAL AND CLINICAL CHARACTERISTICS

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Introduction: Chronic hemodialysis patients are particularly susceptible to infectious complications, owing to repeated vascular access and frequent exposure to healthcare settings.

This study aimed to describe the sociodemographic and clinical characteristics of chronic hemodialysis patients with infections and to assess the epidemiological and microbiological profiles of these infections, including antimicrobial susceptibility.

Methods: A retrospective descriptive study was conducted among chronic hemodialysis patients hospitalized for at least one documented or suspected infectious episode at Fattouma Bourguiba University Hospital of Monastir. Clinical, biological, microbiological and therapeutic data were collected from medical records.

Results: A total of 250 patients were included in this study. The mean age was 56.6 ± 14.7 years, with a male predominance (58.8%). The most common comorbidities were hypertension (69.6%), anemia (71.6%) and diabetes (53.6%). Endovascular infections were the most frequent (40.4%), followed by pulmonary (22.4%), cutaneous (13.6%) and urinary infections (12.8%). The mean duration of hemodialysis before infection was 4.14 ± 4.73 years, with an arteriovenous fistula as the most common vascular access (55.1%).

Gram-positive cocci predominated among isolated pathogens 70.8 %, while Gram-negative bacilli accounted for 25% with multidrug-resistant bacteria identified in 53.2 %.

Cephalosporins were the most frequently prescribed antibiotics (13.8 %) . Treatment was adapted to susceptibility **Results** in 39.4% of cases. The mean hospital stay was 13.6 ± 10.6 days [2-90]. Overall, most patients had a favorable outcome (86%), while in-hospital mortality was 9.2%.

Conclusion: The high burden of endovascular infections highlights the importance of early diagnosis, effective prevention and appropriate antimicrobial therapy in chronic hemodialysis patients.

MÉDECINE D'URGENCE

CO-187: ASSOCIATION BETWEEN NURSING PRACTICE ENVIRONMENT AND MISSED NURSING CARE AMONG EMERGENCY DEPARTMENT

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Introduction: Missed nursing care (MNC) represents a critical patient safety concern, particularly in emergency departments (EDs) characterized by high workload and organizational constraints. The nursing practice environment (NPE) has been identified as a key determinant of care quality; however, data from Arab and African contexts remain scarce. This study aimed to describe the prevalence and nature of MNC, characterize the NPE, identify associated factors, and examine the association between NPE and MNC among ED nurses in the Sahel region of Tunisia.

Methods: A cross-sectional analytical study was conducted from February to April 2026 in the EDs of four university hospitals (CHU Sahloul, Farhat Hached, Fattouma Bourguiba, and Tahar Sfar). An exhaustive sampling approach was adopted, targeting all eligible nursing staff. Data were collected using the validated French versions of the MISSCARE Survey (Part A) and the

Practice Environment Scale of the Nursing Work Index (PES-NWI). Bivariate analyses and multivariate logistic regression were performed using IBM SPSS v29.

Results: A total of 150 nurses were included. The mean MISSCARE score was 2.67 ± 0.69 ; 42.7% of participants reported significant MNC (score ≥ 3). Basic care was the most frequently omitted domain (mean score : 3.14 ± 0.67). The most omitted individual care activities were ambulation/mobilization (88%), meal preparation/feeding assistance (86%), and repositioning (82%). The mean PES-NWI score was 2.64 ± 0.45 , reflecting a predominantly mixed environment (70%). Nurse-physician collegial relations were the highest-rated dimension (2.89 ± 0.60), while staffing adequacy was the weakest (2.35 ± 0.68). Multivariate analysis identified rural residence, partial or complete implementation of electronic patient records, and formalized incident reporting systems as independent predictors of MNC. No statistically significant association was found between PES-NWI scores and MNC (Table 1).

Conclusion: MNC is prevalent in Tunisian EDs and is primarily driven by organizational factors — particularly the absence of structured incident reporting and digital clinical information systems — rather than by the nursing practice environment per se. Targeted organizational interventions are warranted to reduce care omissions and strengthen patient safety.

CO-188: EDUCATIONAL VALUE OF DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS) AS A FORMATIVE ASSESSMENT METHOD

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Introduction: Direct Observation of Procedural Skills (DOPS) is a method for assessing technical procedures. Few data are available regarding its application in emergency medicine for common invasive procedures such as arterial blood gas sampling, which requires both technical skills and professional attitude, and for which rigorous evaluation is crucial. The objective was to assess the usefulness of the DOPS method as a formative assessment tool during emergency medicine clerkships, using arterial blood gas sampling as the target technical skill.

Methods: This was a prospective descriptive study conducted in the emergency department among third-year medical students. All participants had prior theoretical instruction and some initial exposure to the procedure. Each student was observed performing the procedure on a consenting patient, assessed using a standardized DOPS checklist, and provided with structured feedback. The main outcome was successful performance at level 4b, defined as "independent and confident execution of the procedure, with anticipation and prevention of common problems."

Results: Twenty-one students with a mean age of 22 years were included. Their prior experience with arterial blood gas sampling varied significantly. Overall, performance was low: 16 students achieved only level 2a/2b, requiring development in more than three domains, while only one reached level 4a. A significant association was observed between performance and prior experience ($p=0.005$). Although 71% of students rated the procedure as moderately difficult, the median reported stress level (6/10) wasn't associated with performance outcomes.

Conclusion: DOPS proved useful in identifying baseline procedural competencies and providing immediate formative feedback at the start of the emergency medicine clerkship.

Longitudinal application at mid- and end-rotation is warranted to establish its full educational impact and to support competency-based progression.

CO-189: DEVELOPING NON-TECHNICAL SKILLS THROUGH SIMULATION IN CARDIAC ARREST TRAINING FOR FAMILY MEDICINE RE

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Introduction: Effective cardiac arrest management requires not only technical proficiency but also non-technical skills (NTS) such as communication, teamwork, and leadership under stress. Simulation-based training offers a controlled and safe environment to practice these crucial behaviors. This study aimed to assess the impact of simulation on the development of NTS among family medicine residents during cardiac arrest scenarios.

Methods: A prospective, randomized, controlled study was conducted at the CESU 01 simulation center between December 2019 and January 2020. Forty-six residents were randomized into a simulation group ($n=23$) and a control group ($n=23$). Participants in the intervention group received high-fidelity simulation training on cardiac arrest management, including structured debriefing using the SAED communication assessment tool. Performance was assessed immediately (T0) and one month later (T1) using validated NTS checklists.

Results: Residents trained with simulation demonstrated significant improvement in communication and teamwork scores immediately after training (3.3 ± 0.6 vs 2.1 ± 1.2 ; $p < 0.001$). The simulation group also reported higher confidence in managing cardiac emergencies and improved ability to coordinate with team members. At one month, scores remained higher than baseline though slightly reduced (3.1 ± 0.5 ; $p = 0.04$). Participants expressed strong satisfaction with debriefing sessions and highlighted simulation as an emotionally safe environment to learn from errors.

Conclusion: High-fidelity simulation significantly enhances non-technical competencies in cardiac arrest management. Integrating structured debriefing and communication assessment tools strengthens teamwork, leadership, and stress management skills, contributing to safer and more efficient patient care.

CO-190: PREDICTIVE VALUE OF NEWS, SHOCK INDEX, AND SAPS II FOR MORTALITY IN SHOCK PATIENTS

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Introduction: Assessing the severity of patients in shock is fundamental for initial management and determining appropriate therapeutic interventions. Numerous scoring systems have been developed for this purpose.

Aim: To evaluate and compare the prognostic value of three frequently used scores, NEWS, Shock Index (SI), and SAPS II, for

the initial assessment of shock patients in the emergency department

Methods: A prospective, observational, single-center study was conducted in an emergency department over a two-year period (July 2020–July 2022). All patients admitted for shock or who developed shock during their stay were included.

Results: We included 141 patients (mean age: 55.6 ± 18.7 years; 67% male). Initial evaluation combined the standardized ABCDE approach with non-invasive hemodynamic and biological monitoring. Upon admission, NEWS was severe (>7) in 81% of patients, moderate (5–6) in 11%, and low (0–4) in 8%. The mean SI was 1.34 (70% had $SI > 0.9$), and the mean SAPS II score was 46. Comparing survivors and non-survivors revealed that an $SI > 0.9$ ($p=0.001$) and a SAPS II score ≥ 38.5 ($p=0.003$) were significantly associated with higher mortality. Conversely, the NEWS score showed no significant correlation with mortality ($p=0.65$). Consequently, the Shock Index demonstrated superiority over both SAPS II and NEWS in predicting mortality.

Conclusion: Prognostic evaluation in shock patients remains challenging despite abundant literature. Caution is advised when transposing scores validated in healthcare systems outside Tunisia. Nevertheless, establishing a common scientific language for international comparison remains crucial.

CO-191: THE TWO-BAG METHOD FOR DIABETIC KETOACIDOSIS: A RETROSPECTIVE STUDY OF SAFETY AND WORKFLOW IN ED

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Introduction: The two-bag method was designed to simplify DKA management by allowing nurses to titrate dextrose concentration at the bedside rather than waiting for pharmacy-compounded fluids. Data on its performance in routine, high-volume emergency department practice remain limited.

Aim: We evaluated the efficacy, safety, and impact on nursing workflow of the two-bag protocol over seven years of use.

Methods: This retrospective, single-center study included adult DKA patients (glycemia >11 mmol/L, ketonuria, pH <7.30 or bicarbonate <18 mmol/L) treated exclusively with the two-bag protocol using 500-mL bags. Patients initially received normal saline alone; once glycemia fell below 2.5 g/L (13.9 mmol/L), 5% dextrose was added in parallel via a Y-connection, with nurses adjusting flow rates per hourly checks while insulin remained unchanged. Primary outcomes were time to DKA resolution and incidence of iatrogenic hypoglycemia (<3.9 mmol/L).

Results: We reviewed 89 episodes with complete data. Mean age was 39.3 ± 18.4 years, with severe acidosis at presentation (pH 7.16 ± 0.15 ; bicarbonate 7.9 ± 4.3 mmol/L). Mean time to resolution was 17.7 hours (95% CI 14.3–22.2). Hypoglycemia occurred in 10.1% of cases. All episodes were asymptomatic, detected through hourly capillary glucose checks, and managed by adjusting the dextrose infusion rate. No patient developed cerebral edema. Patients required an average of 1.78 ± 0.92 L dextrose and 9.32 ± 2.88 L normal saline. Bag changes were predictable, pharmacy compounding requests were reduced, and nurses managed titration entirely at the bedside.

Conclusion: Over seven years, the two-bag method produced consistent resolution times and simplified nursing workflow by enabling bedside titration. The 10.1% hypoglycemia rate

suggests that using 10% dextrose instead of 5% once glucose drops could further improve safety while preserving these workflow benefits.

CO-192: ROLE OF E-FAST IN POLYTRAUMA PATIENTS IN THE EMERGENCY DEPARTMENT

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Introduction: E-FAST performed by emergency physicians demonstrates variable sensitivity and specificity across studies. The objective of our study was to evaluate the sensitivity and specificity of FAST/E-FAST ultrasound compared to computed tomography (CT), which serves as the gold standard.

Methods: This prospective, descriptive, and analytical study was conducted over a one-year period at the emergency department of Habib Bourguiba University Hospital in Sfax.

Inclusion Criteria:

We included polytrauma patients admitted to the shock room who met the Vittel triage criteria and underwent both a FAST/E-FAST ultrasound and a CT scan upon admission.

Non-Inclusion Criteria:

Pregnant women were non-included in the study.

Exclusion Criteria:

Patients who did not undergo FAST/E-FAST ultrasound Patients who received an ultrasound but did not undergo a CT scan Patients who died prior to completing diagnostic imaging Incomplete medical records lacking clinical, ultrasound, or CT scan data.

The study comprised both a descriptive and an analytical

Results: Our study included 170 patients with a mean age of 34.12 years (range: 3–81 years). Pediatric patients accounted for 37 cases (21.7%). A clear male predominance was observed, with a sex ratio of 3.85 (79.41% vs. 20.58%). Overall, initial E-FAST examination was abnormal in 42 patients (24.7%) out of the 170 performed examinations.

Intra-abdominal effusion was observed in 27 patients. Fluid collection in the pouch of Douglas was the most frequent abdominal lesion (21 cases, 12.35%), followed by pneumothorax (17 cases, 12%). FAST detected 27 cases of peritoneal effusion compared to 39 cases detected by CT scan. For intraperitoneal fluid detection, FAST demonstrated a PPV, NPV, sensitivity, and specificity of 81.4%, 88.1%, 56.4%, and 96.1%, respectively.

FAST identified two cases of pericardial effusion, whereas CT detected only one case. For pericardial fluid detection, the PPV, NPV, sensitivity, and specificity were 50%, 100%, 100%, and 99.4%, respectively.

The presence of a pneumothorax was noted in 17 patients on E-FAST, whereas CT detected 40 cases. For pneumothorax detection, the PPV, NPV, sensitivity, and specificity were 88.2%, 80.9%, 37.5%, and 98.1%, respectively.

Hemothorax was observed in 13 patients on E-FAST compared to 21 cases on CT scan. For hemothorax detection, the PPV, NPV, sensitivity, and specificity were 92.3%, 93.3%, 57%, and 99.2%, respectively.

E-FAST provides rapid, bedside detection of hemoperitoneum, pneumothorax, and pericardial effusion without radiation and at lower cost than CT. It is crucial for hemodynamically unstable patients, where immediate identification of a pneumothorax guides life-saving procedures like chest drainage, preventing progression to tension pneumothorax. However, sensitivity remains modest despite high specificity; thus, a positive result

is highly informative, but a negative result cannot exclude injury.
Conclusion: Our findings align with literature, confirming that E-FAST is a valuable diagnostic tool for thoracic, abdominal, and thoracoabdominal trauma that should be integrated into routine polytrauma evaluation.

CO-193: PREHOSPITAL ACUTE PULMONARY EDEMA: DIABETES PROGNOSIS AND SEVERITY-BASED REFERRAL

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Introduction: Acute pulmonary edema (APE) is a life-threatening cardiovascular emergency in which prehospital risk stratification, prompt treatment, and appropriate referral may influence early outcome. This study assessed the clinical profile, prehospital management, prognostic factors, and triage performance among patients managed for APE by the SMUR Mahres team.

Methods: We conducted a retrospective observational study of patients treated for APE by SMUR Mahres, Sfax, during 2025. Demographic, clinical, electrocardiographic, therapeutic, response-time, referral, and early outcome data were extracted from intervention records. Bivariate analysis explored factors associated with an unfavorable outcome, defined as persistent instability or death.

Results: Twenty-three patients were included (mean age 66.9 ± 22.3 years; 52.2% women). Chronic kidney disease (43.5%), diabetes (39.1%), and arrhythmias (39.1%) were common. Treatment non-adherence was the leading precipitating factor (47.8%). Sudden dyspnea and crackles were present in all patients, while hypoxemia, respiratory failure, or shock occurred in 60.9%. The median response time was 10 minutes, and treatment started after 3.1 ± 3.2 minutes. Oxygen therapy and monitoring were systematic; diuretics were administered in 39.1%, intubation in 17.4%, noninvasive ventilation in 8.7%, and nitrates in 4.3%. Clinical improvement occurred in 65.2%; 30.4% remained unstable and one patient died. Diabetes was significantly associated with unfavorable outcome ($p=0.023$). Hospital destination was also associated with outcome ($p=0.002$): 66.7% of intensive care unit referrals were unstable, whereas all emergency department referrals improved.

Conclusion: Prehospital APE affected highly comorbid patients and frequently presented with severe clinical features despite rapid care. Diabetes was associated with an unfavorable early outcome. Referral destination was closely related to clinical severity, supporting early risk stratification. Larger prospective studies are needed to confirm these exploratory findings and to assess whether broader use of noninvasive ventilation and vasodilators improves outcomes.

CO-194: PREDICTIVE FACTORS OF SEVERITY IN ELECTRICAL INJURY PATIENTS IN THE EMERGENCY DEPARTMENT

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Introduction: Adverse events (AEs) are a frequent reason for consultation in emergency departments and primary care settings. Their clinical presentation is highly variable, ranging from mild or asymptomatic forms to severe, life-threatening events, posing a diagnostic and therapeutic challenge for clinicians. The objective of our study was to identify predictive factors of severity in electrical injury patients in the emergency department, in order to improve early risk stratification and optimize patient management.

Methods: This was a four-year retrospective descriptive study conducted in the Emergency Department of Habib Bourguiba University Hospital in Sfax. We included all patients who presented to our department following an electrical injury over a four-year period. Patients were divided into two groups: those with severe injuries and those with non-severe injuries. A statistically significant difference was considered when $p < 0.05$.

Results: We included 118 patients, of whom 7 (6%) had suffered electrocution and 111 electrical injuries. An electrical exposure without injury was diagnosed in 25.4% of cases, uncomplicated electrical injury in 26.3%, and severe electrical injury or life-threatening distress in 48.3%.

Patients were divided into two groups: severe cases (48.3%) and non-severe cases (51.7%). Statistically significant differences ($p < 0.05$) were found regarding the circumstances of the electrical injury, tetanization, and mode of arrival at the emergency department. Clinical factors included respiratory and cardiovascular involvement, cardiac arrest on admission, electrocardiographic abnormalities, thoracic or abdominopelvic trauma, burns, and muscle injury. Biological factors included rhabdomyolysis, blood glucose, white blood cell count on admission, and persistent rhabdomyolysis at H6 and H12.

Multivariate analysis identified two independent prognostic predictors: a CPK level ≥ 253 IU/L at H1 was associated with severe forms ($p=0.031$, OR=28.27, 95% CI [1.34–594]), whereas a normal ECG at H1 was a protective factor ($p < 0.001$, OR=0.005, 95% CI [0.001–0.03]).

Conclusion: Our findings are consistent with several studies reporting similar severity factors. The association between rhabdomyolysis and severity remains controversial: it was supported by Saracoglu et al. (2014) and Kopp et al., but not by Gokdemir et al. (2013). Leukocytosis was also reported as a potential severity factor by Teodoreanu et al. Renal impairment has been described as a predictor of severity in electrical injuries. Cardiac complications and ECG abnormalities were also identified as prognostic factors by Choi et al. (2019). Early identification of these factors may optimize monitoring patients and help anticipate potential complications.

CO-195: HEATSTROKE :PREDICTORS FACTORS OF POOR PROGNOSIS

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Introduction: The rate of hospital mortality and poor cerebral prognosis related to global warming is increasing. Nevertheless, the predictors of poor prognosis for heatstroke remain unknown. The purpose of this study was to evaluate predictors of poor prognosis in patients with Heatstroke.

Methods: We conducted a retrospective study of adults presenting with heatstroke to the emergency department during the summer months (June to August) from 2020 to 2023. Univariate and multivariate analyses were performed to

identify the independent predictors of poor outcomes

Results: We enrolled 100 cases of heatstroke, 68.7 ± 15.2 years aged included in the study. The outcome was poor in 36% of cases ($n=36$). Multivariate logistic regression identified five independent predictors of a poor neurological prognosis: the presence of autonomy (odds ratio (OR) 17.5; 95% CI: [2.7–110]; $p=0.002$), decreased oxygen saturation $\leq 87\%$ (OR 7.9; 95% CI: [1–58] ; $p=0.042$), and an elevated heart rate >115 bpm (OR 9.6; 95% CI: [9.6–57.1]; $p=0.013$). Additionally, an increased osmolarity >302 mOsm/L (OR 26.2; 95% CI: [3.3–208]; $p=0.002$) and a reduced osmolarity gap ≤ -17.7 mOsm/L (OR 11.3; 95% CI: [1.6–79] ; $p=0.014$) were also strongly associated with adverse neurological outcomes.

Conclusion: Autonomy, decreased oxygen saturation and osmolarity gap, and increased heart rate and osmolarity were significantly associated with poor neurological prognosis.

CO-196: RECURRENCE OF SPONTANEOUS PNEUMOTHORAX: ASSOCIATED FACTORS

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Introduction: Determining the risk of recurrence of primary spontaneous pneumothorax (SP) is challenging.

The objective of this study was to identify factors associated with recurrence.

Methods: A prospective study was conducted on all cases of SP diagnosed in 2024. Eligible cases were adults ≥ 16 years admitted for SP and had benefited from a chest computed tomography CT scan within the next year after his admission

Results: A total of 42 patients were diagnosed with spontaneous pneumothorax during the study period. The median age was 45 with quartiles 28 and 60. The sex-ratio was 41. The recurrence rate was 38% ($n=16$). The duration of follow-up ranged from 7 days (shortest time to recurrence) to 1 year (median, 2 months). Univariate analysis showed that risk factors identified were bilateral (OR:9.5; 95% CI [1.7-50.8]; $p=0.004$), biapical (OR :5.4; 95 % CI [1.3-21.6]; $p=0.013$) and no COPD emphysema (OR:5.5[1.4-21.7]; $p=0.011$). Multivariate analysis showed that bilateral emphysema (OR:10.3; 95% CI [1.6-63.2]; $p=0.012$) and no COPD emphysema (OR:6; 95% CI [1.2-29.1]; $p=0.024$) were independently associated with recurrence.

The model demonstrated a good discriminative power for the prediction of recurrence [AUC = 0.82 (95% CI = 0.686, 0.954)]

Conclusion: The overall recurrence rate was higher in patients who had bilateral emphysema and emphysema without underlying COPD

CO-197: PREDICTORS OF HOSPITALIZATION DURING PATIENT RECONSULTATION

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Introduction: Reconsultation pose a significant burden on both patients and healthcare providers, with approximately 5–10% of the patients returning to the emergency department (ED) within seven days. The objective of this study was to identify the independent predictors of hospitalization.

Methods: We conducted a prospective study of adults

presenting with reconsultation from november 1, 2024, to november 1, 2025 to the emergency department. Univariate and multivariate analyses were performed to identify the independent predictors of hospitalization.

Results: We enrolled two hundred fifty cases. The mean age was 49.8 ± 19.6 ans with extremes going from 16 to 96. We noticed a predominance of male gender with sex-ratio (H/F) at 1,23. The period between two consultations in emergency department was three days (SD=1.86) with extremes going from one day to seven days. Multivariate logistic regression identified independent predictors of hospitalization during reconsultation : Diabetes (odds ratio (OR) 6,5; 95% CI: [2.8–14.9]; $p<0.001$), fever (OR 2.9; 95% CI: [1.2–6.7] ; $p=0.014$), dyspnea (OR 3.5; 95% CI: [1.3–9.6]; $p=0.013$),nausea (OR 3.6; 95% CI: [1.3–10]; $p=0.014$) and system-level reconsultation relative to the disease (OR 2.9; 95% CI: [1.1–7.3]; $p=0.021$). In contrast, patient-based reconsultation relative to disease was found to be a protective factor against admission (OR 0.17; 95% CI: [0.03–0.8]; $p=0.032$).

Conclusion: Patients who were hospitalized after a reconsultation to the emergency department had a more rate of history of diabetes, fever, dyspnea,nausea and system -level reconsultation relative to the disease. In contrast, patient-based reconsultation relative to disease was a protective factor against admission.

CO-198: PROGNOSTIC PERFORMANCE OF THREE SEVERITY SCORES IN HOSPITALIZED COMMUNITY ACQUIRED PNEUMONIA

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Introduction: Community-acquired pneumonia (CAP) remains one of the leading causes of emergency hospitalization and continues to carry substantial mortality. Early identification of severe forms is essential to guide treatment decisions and determine the appropriate level of monitoring. Several prognostic stratification tools have been proposed for this purpose including A-DROP, FINE (PSI), and CURB-65 without a clear consensus on their comparative performance in routine clinical practice. This study aimed to evaluate and compare the prognostic value of the A-DROP, FINE, and CURB-65 scores regarding in-hospital mortality in patients managed for CAP.

Methods: This was a cross-sectional observational study involving patients hospitalized for CAP. All three scores were calculated at admission. In-hospital death served as the comparison criterion. Statistical analysis relied on Student's t-test for independent samples (after checking variance homogeneity using Levene's test), complemented by effect size calculation (Cohen's d).

Results: The sample included 303 patients (sex ratio 0.7). Active smoking was present in more than half the cohort (53.1%). The most common comorbidities were arterial hypertension (47.5%), diabetes (38.3%), and chronic respiratory disease (27.4%).

All three scores were significantly higher in patients with an unfavorable outcome ($p < 0.001$ for all comparisons). Mean differences were 0.68 points for A-DROP (95% CI [0.41–0.95]), 30.3 points for FINE (95% CI [21.4–39.2]), and 0.71 points for CURB-65 (95% CI [0.43–0.99]). Discriminative power, assessed by AUC, was highest for FINE (0.85), followed by A-DROP (0.67) and CURB-65 (0.64).

All three tools confirmed their prognostic relevance in our cohort of patients hospitalized for CAP. FINE showed the best

discriminative ability (AUC = 0.85), consistent with findings from España et al., who identified the PSI as one of the most robust scores for predicting mortality in hospitalized CAP, despite its greater computational complexity compared with simplified scores. A-DROP and CURB-65, by contrast, showed more modest but comparable performance. This finding aligns with the observations of Shindo et al., who reported that A-DROP performs similarly to, or slightly better than, CURB-65, supporting its use as a simple alternative in clinical practice.

Conclusion: A-DROP, FINE, and CURB-65 are all associated with in-hospital mortality in CAP. FINE offers the best prognostic performance, while A-DROP and CURB-65, owing to their simplicity, remain useful tools for rapid severity assessment in emergency settings.

CO-199: PROGNOSTIC VALUE OF AN EARLY WARNING SCORE IN THE MANAGEMENT OF NSTEMI IN THE EMERGENCY DEPARTMENT

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Introduction: Non-ST-elevation acute coronary syndrome (NSTEMI) is a common reason for emergency department admission and remains associated with significant mortality. Rapid risk assessment at admission is necessary to guide initial management. The National Early Warning Score (NEWS), based on simple and readily measurable physiological parameters, may represent a useful tool in this setting. This study aimed to assess the performance and prognostic value of the NEWS score in predicting in-hospital mortality among patients admitted for NSTEMI.

Methods: This was a prospective, observational, longitudinal study conducted from February 1, 2024, to September 30, 2025, including patients admitted to the emergency department for NSTEMI. The NEWS score was calculated at admission. Its predictive value for in-hospital mortality was analysed using logistic regression, and its discriminative performance was assessed via ROC curve analysis.

Results: A total of 250 patients were included, with a mean age of 63 ± 10 years and a sex ratio of 1.7. The predominant cardiovascular risk factors were arterial hypertension (56%), diabetes (48.4%), and dyslipidaemia (22.8%). A history of coronary stenting was present in 24.9% of patients.

Chest pain was the main presenting complaint (91.6%), followed by dyspnea (16.4%). Overall in-hospital mortality was 6%.

A high NEWS score, found in 15% of patients, was significantly associated with in-hospital mortality ($p < 0.01$; OR = 3.9; 95% CI [2.42–5.44]). ROC analysis showed good discriminative ability (AUC = 0.77; 95% CI [0.63–0.91]; $p < 0.01$), with an optimal cutoff of 2 (sensitivity 73%, specificity 78%).

Discussion Our **Results** are consistent with those of Zhang et al., who examined the prognostic value of NEWS in a broader population of acute cardiovascular conditions, including acute coronary syndromes. In that study, NEWS alone showed moderate predictive capacity for 30-day mortality (AUC ≈ 0.67), which was substantially improved by the addition of cardiac biomarkers (troponin I, NT-proBNP).

Unlike that heterogeneous cohort, our study focused exclusively on NSTEMI patients, which may explain the higher performance of NEWS observed in our series (AUC = 0.77). This population specificity appears to enhance the prognostic relevance of the physiological parameters included in the score.

Conclusion: Calculated at emergency department admission, the NEWS score shows good predictive value for in-hospital mortality in patients managed for NSTEMI. Its systematic use could facilitate earlier identification of high-risk patients and help optimize their management.

CO-200: STAGE-BY-STAGE SATISFACTION WITH AN EMERGENCY MEDICAL SERVICE

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Introduction: User satisfaction surveys are a recognized quality-improvement tool in emergency medical services (EMS), but overall satisfaction scores may mask disparities between successive stages of the caller's journey: call reception, medical regulation, and on-scene care.

Aim: To compare caller satisfaction across the three successive stages of EMS management (call-taking assistant, regulating physician, on-scene medical team) and identify the stage most associated with dissatisfaction.

Methods: Cross-sectional telephone survey of 113 primary callers to EMS 01 (North-East Tunisia) whose calls occurred between 1 and 30 October 2023, using a 5-point Likert scale (1 = very dissatisfied to 5 = very satisfied) covering the call-taking assistant, the regulating physician, and the on-scene medical team; composite scores were compared with the Friedman test.

Results: Satisfaction differed significantly across the three stages ($p = 0.009$, Table 1). Satisfaction was highest with the call-taking assistant (mean 4.68 ± 0.58) and the regulating physician (4.64 ± 0.64 ; $p = 0.34$ vs assistant), and significantly lower with the on-scene medical team (4.53 ± 0.76 ; $p = 0.023$ vs assistant, $p = 0.042$ vs regulating physician). Within the on-scene team, arrival time was the lowest-rated item (mean 4.45 ± 0.93 ; 88.5% satisfied, versus 92–97% for all other items across the three stages). Overall satisfaction was 90.3%, and 76.1% were totally willing to recall the service if needed.

Conclusion: While overall satisfaction with EMS 01 is high, it is not uniform across the caller's journey: satisfaction is significantly lower with the on-scene team than with call reception or medical regulation, driven mainly by arrival time. Reducing response times may be the single most effective lever to further improve user satisfaction.

CO-201: PROGNOSTIC PERFORMANCE OF THE PLATELET-TO-LYMPHOCYTE RATIO AND THE SOFA SCORE IN SEPTIC PATIENTS

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Introduction: Early identification of septic patients at high risk of adverse outcomes poses a major challenge for frontline physicians. This study aimed to compare the prognostic performance of the platelet-to-lymphocyte ratio (PLR) and the Sequential Organ Failure Assessment (SOFA) score in predicting mortality among patients with sepsis admitted to the emergency department.

Methods: This was a prospective observational cohort study conducted in the emergency department of Mongi Slim Hospital over two years. We included all patients aged 18 years and older admitted for the management of sepsis. The RPL and

the SOFA score were calculated upon admission. The primary outcome was in-hospital mortality. To determine the prognostic value of the RPL and the SOFA score, we generated ROC curves.

Results: We included 213 patients with a mean age of 67 ± 16 years and a male-to-female ratio of 0.86. Median RPL and SOFA score at admission were 203 [104–347] and 6 [4–8], respectively. In-hospital and one-month mortality rates were 35.7% and 40.8%, respectively. The area under the curve (AUC) for in-hospital mortality was 0.81(95%CI:0.75–0.87; $p<0.001$) for RPL and 0.82(95%CI:0.76–0.87; $p<0.001$) for SOFA, with respective cut-off values of 200 (sensitivity=83.3%,specificity=65.9%) and 5 (sensitivity=88.2%,specificity=63%). At one month, the AUC for RPL was 0.79 (95% CI: 0.73–0.86; $p<0.001$) with a cut-off of 198 (sensitivity=80.5%, specificity=63.4%). For SOFA, it was 0.78 (95%CI:0.71–0.84; $p<0.001$) with a cut-off of 5 (sensitivity=80%,specificity=61%).

Conclusion: RPL and SOFA score are comparable in predicting in-hospital and one-month mortality among patients admitted to the emergency department with sepsis.

CO-202: PREDICTORS OF IN-HOSPITAL MORTALITY OF SEPTIC PATIENTS IN THE EMERGENCY DEPARTMENT

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Introduction: Identifying septic patients at risk of adverse outcomes at an early stage remains challenging in the emergency department. We aimed to determine predictors of in-hospital mortality in septic patients admitted to the emergency department.

Methods: A cohort observational, longitudinal prospective study was conducted in the emergency department of Mongi Slim Hospital, including patients aged 18 years and over, admitted for sepsis or septic shock. The primary outcome was in-hospital mortality. Predictors of in-hospital mortality were investigated.

Results: We included 213 patients, with a mean age of 67 ± 16 years and sex ratio (M/F) of 0.86. The comorbidities were hypertension (46%), diabetes (45.1%), and chronic kidney disease (17.4%). Principal presenting complaints were asthenia (47.9%) and dyspnea (32.4%). At admission, all patients had sepsis. The mean SOFA was 6 [4–8], and the median qSOFA was 2[0–3]. Mortality in the emergency department was 31%. Multivariate logistic regression analysis identified three independent factors associated with in-hospital mortality in patients with sepsis: a Glasgow Coma Scale score < 15 at admission (adjusted OR = 4.83; 95% CI = [2.18–10.73]; $p=0.001$), the use of vasoactive drugs (adjusted OR = 1.46; 95% CI = [1.01–2.11]; $p=0.003$), and an NLR ≥ 200 at admission (adjusted OR = 11.19; 95% CI = [4.83–25.9]; $p<0.001$).

Conclusion: PLR is a simple and inexpensive biomarker that predicts short- and medium-term mortality in sepsis. Its integration into early stratification could improve prognosis.

CO-203: PROGNOSTIC VALUE OF THE PLATELET-TO-LYMPHOCYTE RATIO IN SEPTIC PATIENTS IN THE EMERGENCY DEPARTMENT

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Introduction: The early recognition of septic patients at high risk of adverse outcomes remains a critical challenge in the emergency department. We aimed to assess the prognostic value of the platelet-to-lymphocyte ratio (PLR) for in-hospital, 1-month, and 6-month mortality.

Methods: Longitudinal, observational study conducted in the emergency department of Mongi Slim Hospital (2022-2023), including patients aged 18 years and over, admitted for sepsis or septic shock. PLR at admission was assessed to predict in-hospital, 1-month, and 6-month mortality.

Results: A total of 213 patients were included, with a mean age of 67 ± 16 years and sex ratio (M/F) of 0.86. The comorbidities were hypertension (46%), diabetes (45.1%), and chronic kidney disease (17.4%). The presenting complaints were asthenia (47.9%) and dyspnea (32.4%). At admission, all patients had sepsis, 99 (46.5%) septic shock. The median initial PLR was 202.9 [104–347]. Mortality in the emergency department was 31%. Cumulative in-hospital, 1-month, and 6-month mortality rates were 35.7%, 40.8%, and 45.5%, respectively. The areas under the ROC curves of PLR for in-hospital, 1-month, and 6-month mortality were 0.81 (CI95%= 0.75 - 0.87), 0.79 (CI95%= 0.73 - 0.86), and 0.77 (CI95%= 0.70 - 0.84), respectively ($p<0.001$). For in-hospital mortality, a cut-off of 200 was retained (Se=83.3%, Sp=65.9%, PPV=59.6%, NPV=86.7%).

Conclusion: PLR is a simple and inexpensive biomarker that predicts short- and medium-term mortality in sepsis. Its integration into early stratification could improve prognosis.

CO-204: ANTIBIOTICS ANAPHYLAXIS : EPIDEMIOLOGY, CLINICAL FEATURES AND MANAGEMENT

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Introduction: Anaphylaxis is a serious systemic reaction. It is a common reason for visits in the emergency department (ED). The antibiotics have been widely implicated in allergic reactions. The aim of our study was to determine the epidemiological, clinical and prognostic factors of patients admitted to the ED for antibiotics anaphylaxis.

Methods: prospective and monocentric study over sixteen years. Inclusion criteria: adults patients admitted to the ED for antibiotics anaphylaxis. Collection of epidemiological, clinical and therapeutic parameters. A multivariate analysis of predictors of shock, and recurrence was conducted.

Results: Inclusion of 262 patients. Mean age= 42 ± 14 years. Sex-ratio=0.95. Penicillin was the most represented drug class among antibiotic allergens (82%), the most incriminated was the penicillin A (58%). Cutaneous features were present in 95% of patients. Cardiovascular, respiratory, gastrointestinal and neurologic features were found respectively in 52, 42, 20 and 8%. Anaphylactic shock was recorded in 107 patients (41%). Adrenaline was used in 78% of patients, intravenously in 51%. Factors identified to be predictive for anaphylactic shock were: history of anaphylaxis (OR=2.24; $p=0.01$; CI95% [1.32; 9.31]) and neurologic features (OR=2.05; $p=0.01$; CI95% [1.36; 15.35]). Recurrence of the anaphylactic reaction was observed in six patients (4.8%). Factors independently related to recurrence

were: parenteral administration (OR=3.38; p=0.02; IC 95% [1.39 – 7.99]), respiratory signs (OR =2.25; p=0.03; IC 95% [1.45 – 18.35]) and the use of adrenaline 100 µg (OR=3.84; p<0.001; IC 95% [1.52 – 4.31]). The improvement was noted in 259 patients (99%). No deaths were recorded.

Conclusion: Antibiotics anaphylaxis was under diagnosed in the ED and its serious evolution remains unpredictable. It is therefore imperative to conduct a pathway of care between ED and pharmacovigilance services.

CO-205: PREDICTIVE FACTORS FOR UNFAVORABLE OUTCOME IN SEVERELY TRAUMATIZED PATIENTS WITH HEAD INJURIES

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Introduction: Severe trauma is a leading cause of mortality, particularly among young individuals. Brain injuries figure prominently among these severe injuries. Our study aimed to identify predictors of poor outcomes in severely injured patients presenting with traumatic brain injury and brain lesions.

Methods: This was a prospective observational, analytical study conducted in the emergency department over two years. We included all severely traumatized patients aged 15 years and older who presented with a traumatic brain injury accompanied by CT-scan-confirmed cerebral lesions. The primary outcome was the presence of motor impairment at hospital discharge, assessed using the Glasgow Outcome Scale (GOS). Patients were subsequently divided into two groups based on their GOS score: a group with significant impairment (GOS=[1–3]) and a group with minor motor impairment (GOS=[4–5]).

Results: We included 202 patients with a mean age of 41±18 years. The male-to-female ratio was 4.05. Road traffic accidents were the primary mechanism of severe trauma (74.2%). The mean Glasgow Coma Scale score at admission was 13 [3–15]. Traumatic brain injury was classified as mild, moderate, or severe in 80.7%, 4.4%, and 14.9% of cases, respectively. In multivariate analysis, independent predictors of an unfavorable outcome (GOS≤ 3) were: oxygen saturation<90% (p=0.006), the need for mechanical ventilation (p<0.001), serum creatinine>110µmol/L (p=0.013), a Reverse Shock Index<1 (p=0.001), and midline shift on brain CT (p=0.002).

Conclusion: Identifying predictors of poor outcomes in severely injured patients with traumatic brain injury is a major challenge for optimizing early management and guiding therapeutic decisions.

CO-206: PREDICTORS OF SEVERITY IN PATIENTS WITH CARBON MONOXIDE POISONING IN THE EMERGENCY DEPARTMENT

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Introduction: Carbon monoxide (CO) poisoning is potentially severe. Early recognition of high-risk patients may improve outcomes. The aim of this study was to identify predictors of severe CO poisoning in patients managed in the emergency department (ED).

Methods: A prospective single-center study was conducted

over nine years (January 2016 - November 2025). All patients admitted to the ED for CO poisoning confirmed by an anamnestic context, clinical signs and a carboxyhemoglobin (COHb) level ≥5% were included. Clinical severity was defined by the presence of neurological signs (altered level of consciousness, seizures) or cardiovascular signs (syncope, elevated troponin). Two groups were compared: S+ (patients with severe poisoning) and S- (absence of severity signs). Predictive factors for the occurrence of severe CO poisoning were evaluated using univariate and multivariate analyses.

Results: We included 1534 patients. The mean age was 37±15 years with a sex ratio of 0.3. The sources of CO included (%): braziers (48), gas water heaters (42) and gas space heaters (10). Severe CO poisoning was observed in 171 patients (11%). When comparing the two groups, there was no significant difference regarding mean age (39±16 years for S+ vs. 37±15 years for S-; p=0.2), mean duration of exposure (163±136 min vs. 212±151 min; p=0.4) or mean time to consultation (208±149 min vs. 325±151 min; p=0.4). However, the S+ group presented with significantly higher mean COHb levels (24±10% vs. 20±10%; p<0.001) and mean blood lactate levels (3±2 mmol/L vs. 2±1 mmol/L; p<0.001). Additionally, hyperbaric oxygen therapy was administered significantly more often in the S+ group (60%, n=102) compared to the S- group (12%, n=157) (p<0.001). In univariate analysis, two factors of severe poisoning were identified: COHb ≥21% (OR=1.5; 95% CI [1.04-2.2]; p=0.03) and lactate ≥2.5 mmol/L (OR=2.1; 95% CI [1.4-3.1]; p<0.001). In multivariate analysis, a blood lactate level ≥2.5 mmol/L was an independent predictor of severity (adjusted OR=1.4; 95% CI [1.1-1.7]; p=0.001).

Conclusion: A blood lactate level ≥2.5 mmol/L may help identify patients at risk of severe carbon monoxide poisoning at an early stage.

MÉDECINE DE FAMILLE

CO-207: EXPLORING DIABETES KNOWLEDGE IN PRIMARY HEALTHCARE CENTERS IN SFAX: A CROSS-SECTIONAL STUDY

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Introduction: Diabetes is a major public health challenge in Tunisia. Adequate patient knowledge improves disease management and control. In light of this, this study aimed to assess diabetes knowledge among patients followed in primary healthcare centers (PHCC) and to identify its associated factors.

Methods: A cross-sectional study was conducted via face-to-face interviews among patients with diabetes followed in PHCC in Sfax, Tunisia, from April to June 2026. Diabetes knowledge was assessed using the validated 20-item Simplified Diabetes Knowledge Test (SDKT).

Results: Among 160 participants, 97 (60.6%) were women. The

mean age was 62.1±9.8 years, with 67 participants (41.9%) aged over 65. Type 2 diabetes predominated (154 patients; 96.3%), with a median disease duration of 12 years (IQR: 6–17). Fifty-seven patients (35.6%) had previously attended diabetes self-management education sessions.

Among non-insulin-treated patients (n=96), the median knowledge score was 11/18 (IQR: 9–13); with 38 patients (39.6%) demonstrated good knowledge which was independently associated with urban residency (AOR=4.26 [1.32-16.13]; p=0.016), Moderate or high incomes (≥500 DT) (AOR=6.23 [2.38-16.29]; p<0.001) and low-cost medical coverage (AOR=6.28 [1.59-2.48]; p=0.009) in multivariate analysis.

Among insulin-treated patients (n=64), the median score was 12/20 (IQR: 10–14), with 29 (45.3%) achieving good knowledge and no significant association was noted.

Conclusion: Diabetes knowledge among primary care patients in Sfax remains suboptimal. Tailored therapeutic education program targeting vulnerable demographic groups should be integrated into routine primary care to improve patients' knowledge and disease outcomes.

CO-208: FRAILTY SCREENING IN OLDER ADULTS: KNOWLEDGE AND PRACTICES AMONG PRIMARY CARE PHYSICIANS

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Introduction: Demographic aging is accompanied by an increase in the prevalence of frailty, a geriatric syndrome associated with an increased risk of falls, hospitalizations, dependency, and mortality. Early detection of frailty is an essential strategy for preventing loss of autonomy in older adults. Primary care physicians play a central role in this identification, but Tunisian data regarding their knowledge and practices remain limited.

Aim: To assess the knowledge, practices, and obstacles encountered by primary care physicians in Tunisia in screening for frailty in older adults, as well as to identify their needs and expectations regarding training and the organization of care.

Methods: descriptive cross-sectional study was conducted among general practitioners and family physicians working in primary care in Tunisia. Data were collected using an anonymous, self-administered questionnaire distributed online via Google Forms®. The variables studied included professional characteristics, knowledge of frailty, screening practices, attitudes, obstacles encountered and expressed needs.

Results: Results: A total of 123 physicians participated in the study. Although 99.2% of respondents considered frailty screening important in primary care, only 41.5% reported performing it regularly in patients over 75 years of age. A small proportion had received specific training in screening tools (23.6%). The main obstacles identified were difficulties in referring frail patients (64.2%), lack of training (61.8%), and lack of time during consultations (54.5%). Most participants wanted additional training (89.5%) and access to simple and quick screening tools (75.8%).

Conclusion: Frailty screening is widely recognized as relevant by Tunisian primary care physicians but remains insufficiently integrated into daily practice. Strengthening training, providing appropriate tools, and organizing structured care pathways

appear essential to improving the early identification and management of frail older adults.

CO-209: ANXIETY AMONG FINAL-YEAR SECONDARY-SCHOOL STUDENTS PRIOR TO FINAL EXAM: PREVALENCE AND PREDICTIVE FA

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Introduction: As a key year concluding with high-pressure graduation exams, the baccalaureate period could increase vulnerability to anxiety among students. This study assessed anxiety and its predictive factors among final-year secondary-school students in Menzel Chaker, southern Tunisia, prior to final exam.

Methods: A cross-sectional study was conducted on April 8, 2026, among final-year students at Menzel Chaker Secondary School in Sfax. Data were anonymously collected via a self-administered questionnaire assessing sociodemographic and lifestyle characteristics, alongside the validated 21-item Arabic version of the Depression, Anxiety and Stress Scales–Youth (DASS-Y).

Results: Overall, 151 students participated. The median age was 19 years (Interquartile range (IQR)= [19–20]) and 112 students (74.2%) were female. There were 36 students (23.8%) reported regular physical activity. Fear of failure (56.7%) (n=85) and academic demands (49.3%) (n=74) were the leading reported causes of perceived anxiety.

The median DASS-Ya anxiety score (AS) was 8/21 (IQR= [4–11]). Anxiety was noted among 103 students (68.2%) (AS>5/21). Anxiety was moderate (AS= [8-12]/21), severe ([13-15]/21) and very severe ([16-21]/21) among 46 (30.5%), 21 (13.9%) and 10 (6.6%), of students respectively.

Multivariate analysis showed that female gender (Adjusted Odds ratio (AOR)=12; 95% Confidence interval (CI)=[4.6-31.5]; p<0.001), depression (DASS-Yd>6/21) (AOR=3.9; CI95%=[1.6-10]; p=0.004) and insomnia (AOR=3.3; CI95%=[1.3-8.4]; p=0.01) were a predictive factors of anxiety among final-year secondary school students.

Conclusion: Anxiety prevalence was relatively high among final-year secondary school students. Female gender, insomnia, and co-occurring depression were identified as key predictors. Thus, school-based mental health screening, accessible psychological counseling and sleep-health promotion, should be prioritized ahead of national exams.

MÉDECINE DENTAIRE

CO-210: CLINICAL STRESS DURING COMPLETE DENTURE TRAINING AMONG UNDERGRADUATE DENTAL STUDENTS

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Introduction: Complete denture treatment is one of the most technically demanding components of undergraduate prosthodontic education. Although stress among dental students has been widely investigated, evidence identifying the most stressful stages of complete denture treatment remains limited.

Aim : To evaluate perceived stress throughout complete denture clinical procedures and identify procedure-specific factors associated with increased stress among undergraduate dental students.

Methods: A cross-sectional analytical study was conducted among 110 fifth-year dental students enrolled in complete denture clinical training. Perceived stress was assessed at five treatment stages (primary impression, border molding/final impression, jaw relation, try-in, and denture insertion) using a four-point Likert scale. Stress scores were compared using one-way ANOVA. Gender differences were analyzed using the independent-samples t-test. Associations between treatment stages and stress-related factors were assessed using the Chi-square test, while Pearson's correlation evaluated the relationship between stress and clinical experience. Statistical significance was set at $P < 0.05$.

Results: The overall mean stress score was 2.78 ± 0.77 , indicating a moderate-to-high level of perceived stress. Stress varied significantly across treatment stages ($F(4,105)=2.45$, $P=0.029$), with the highest scores recorded during jaw relation (3.08 ± 0.72) and border molding/final impression (3.02 ± 0.76). Female students reported significantly higher stress than males ($P=0.0096$). Stress-provoking factors differed significantly according to the clinical stage ($\chi^2(12)=28.47$, $P=0.004$), with procedural complexity and fear of making clinical errors emerging as the principal stressors. No significant correlation was observed between stress and clinical experience.

Conclusion: Stress during complete denture clinical training is procedure-specific, with jaw relation and final impression procedures representing the greatest psychological challenge for undergraduate students. Targeted simulation-based training, closer supervision during high-stress procedures, and stress-management interventions may enhance students' confidence, clinical competence, and educational outcomes

CO-211: EVALUATION OF CLINICAL REASONING LEARNING AMONG DENTAL INTERNS: A CROSS-SECTIONAL STUDY

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Introduction: Clinical reasoning learning (CRL) is an educational approach based on contextualizing learning through concrete clinical situations. This method promotes active learner engagement and aims to strengthen their abilities in clinical analysis, synthesis, and decision-making. The aim of this study was to evaluate dental interns' satisfaction with clinical reasoning learning sessions and to explore their perceptions of the contribution of this approach to the development of their clinical competencies.

Methods: A descriptive cross-sectional study was conducted among seven successive groups of dental interns, comprising a total of 52 participants. All participants had completed a six-month internship within the Dental Medicine Department of Farhat Hached University Hospital in Sousse, Tunisia. Following the clinical reasoning learning sessions, the interns were invited to complete an anonymous evaluation questionnaire, which was accessible via a QR code.

Results: All 52 interns participating in the study recognized the educational value of clinical reasoning learning. An overall satisfaction rate of 94% was reported. The presentation of clinical cases also generated considerable interest, with 75% of participants expressing satisfaction with this aspect of the sessions. Furthermore, 82% of the interns considered that clinical reasoning learning sessions contributed to the development of their clinical competencies. Overall, these findings indicate a favorable perception of this educational approach and highlight its perceived relevance to the clinical training of dental interns.

Conclusion: This educational experience demonstrated strong acceptance of clinical reasoning learning among dental interns, along with a positive perception of its contribution to clinical training. Further multicenter studies involving larger samples and diverse educational settings are warranted to confirm these findings and identify the most effective modalities for optimizing clinical reasoning learning sessions.

CO-212: KNOWLEDGE, ATTITUDES AND PRACTICES OF DENTISTS TOWARD DENTAL ANESTHESIA AND ITS COMPLICATIONS

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Introduction: Local and loco-regional anesthesia is an essential procedure in daily dental practice. Although it is considered safe, it may be associated with local or systemic complications, especially when dosage, technique, medical history, or drug interactions are not properly considered. The objective of the present study was to investigate the knowledge level, attitudes, and practices of Tunisian dentists toward dental anesthesia and its complication risks.

Methods: This was a cross-sectional study carried out among dentists practicing in Tunisia. The sample size of the participants was calculated using the standard formula: $N = Z^2 \times P \times (1 - P) / M^2$, with $Z = 1.96$, $P = 0.5$, and $M = 5\%$.

An anonymous questionnaire inspired from the relevant

literature was distributed online through Google Forms and social networks. The questionnaire included 35 closed and multiple-choice questions investigating socio-demographic characteristics, knowledge, attitudes, clinical practices, and adverse effects related to dental anesthesia. Statistical analysis was performed using IBM SPSS Statistics software, version 23.0. Approval from the ethics committee of the faculty of dental medicine was obtained.

Results: A total of 386 dentists participated in the study. The **Results** revealed that 63.7% of the respondents demonstrated a poor knowledge level regarding dental anesthesia, especially about the maximum recommended doses and epinephrine limits. Furthermore, knowledge level was higher regarding the use of vasoconstrictors.

About half of the participants reported confidence in performing dental anesthesia techniques, while many expressed uncertainty when treating medically compromised patients or when using some anesthesia techniques of the mandibular nerve. More than 80% of dentists were interested in continued training.

Regarding clinical practice, most participants (90.2%) reported checking medical history and allergies before anesthesia, but some important precautions, such as systematic aspiration before injection, were not always performed (only 3.9%). Mandibular block techniques are commonly used, but the Vazirani-Akinosi technique is not widely used.

Among the participants, 13.7% never experienced any local complications, but 47.9% reported systemic complications.

Local complications were more frequently reported than systemic complications, mainly lack of anesthetic effect and pain at the injection site.

Conclusion: Tunisian dentists showed insufficient knowledge regarding several important aspects of dental anesthesia, particularly dose calculation, vasoconstrictor use, and management of medically compromised patients. Although many practitioners reported acceptable clinical practices, some safety measures need to be reinforced. Continuous education and practical training are necessary to improve the safety of dental anesthesia practices and prevent complications' risks.

CO-213: ORAL HEALTH BEHAVIORS AMONG TUNISIAN DENTAL STUDENTS: A CROSS-SECTIONAL STUDY

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Introduction: Dental students are expected to serve as role models for oral health. However, progression through dental education does not necessarily translate into better personal oral health practices.

Aim: To assess oral health knowledge, attitudes, and behaviors among preclinical and clinical dental students in Tunisia using the Hiroshima University-Dental Behavioral Inventory (HU-DBI).

Methods: A cross-sectional study was conducted among undergraduate dental students at the Faculty of Dental Medicine

of Monastir during the 2022–2023 academic year. Participants completed the 20-item English version of the HU-DBI. Students were stratified into preclinical (semesters 1–6) and clinical (semesters 7–12) groups. HU-DBI scores and individual items were compared using the Mann–Whitney U and Chi-square tests, with statistical significance set at $p \leq 0.05$.

Results: A total of 200 students participated. Clinical students had significantly higher HU-DBI scores than preclinical students (median: 7 [IQR: 6–9] vs. 5.5 [IQR: 4–7], $p < 0.001$). Clinical students also demonstrated significantly better oral health knowledge ($p < 0.05$), with significant differences observed for nine individual HU-DBI items. However, these improvements were not consistently reflected in attitudes or behaviors. Although attitude scores differed significantly between groups ($p = 0.003$), no significant difference was observed in reported oral hygiene behaviors ($p = 0.180$).

Conclusion: Clinical dental education in Tunisia appears to improve oral health knowledge but does not consistently translate into healthier personal behaviors. Integrating behavioral and preventive components into the dental curriculum may help bridge this knowledge–behavior gap.

CO-214: ADJUNCTIVE BONE SUBSTITUTES WITH RHFGF-2 FOR PERIODONTAL INTRABONY DEFECTS: META-ANALYSIS

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Introduction: Background: Recombinant human fibroblast growth factor-2 (rhFGF-2) has been increasingly used for periodontal regeneration, alone or combined with bone grafts and scaffolds. However, the relationship between clinical attachment improvement and radiographic regeneration, and the incremental value of adjunctive scaffolds, remain unclear.

Objective: To evaluate the clinical and radiographic effectiveness of rhFGF-2 in periodontal intrabony defects and to determine whether adjunctive grafting materials provide additional benefit over rhFGF-2 alone.

Methods: Randomized controlled trials evaluating rhFGF-2 for periodontal intrabony defects were identified through systematic searches of PubMed, Scopus, and Cochrane databases. Risk of bias was assessed using RoB 2 and certainty of evidence using GRADE. Random-effects meta-analyses were performed separately for rhFGF-2 versus controls without rhFGF-2 and rhFGF-2 plus graft/scaffold versus rhFGF-2 alone.

Results: Ten publications representing nine independent randomized trials were included. For rhFGF-2 versus control, CAL gain was not significantly improved (MD 0.15 mm; 95% CI -0.27 to 0.57; $I^2 = 39.6\%$), whereas radiographic bone fill increased (MD 27.14 percentage points; 95% CI 11.01 to 43.27; $I^2 = 82.8\%$). Adding a graft/scaffold did not significantly improve CAL gain (MD 0.33 mm; 95% CI -0.15 to 0.80; $I^2 = 0\%$) but increased radiographic bone fill (MD 26.37 percentage points; 95% CI 9.77 to 42.96; $I^2 = 80.1\%$).

Conclusion: rhFGF-2 appears to enhance radiographic hard-tissue regeneration more consistently than clinical attachment gain. Adjunctive scaffolds further increase radiographic defect fill without a corresponding significant improvement in CAL. These findings highlight a clinically relevant dissociation between radiographic and clinical outcomes and support cautious interpretation of radiographic superiority as a surrogate for true periodontal regeneration.

CO-215: EXTERNAL TOOTH WHITENING ON VITAL TEETH: CROSS SECTIONAL STUDY

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Introduction: External tooth whitening is a widely used aesthetic treatment for vital teeth discolorations. Its increasing use requires appropriate case selection, technique and management of potential adverse effects, particularly post-whitening sensitivity. Assessing dentists' practices is therefore important to identify gaps and promote safe, evidence-based procedures.

Aim: To assess the practice of external tooth whitening on vital teeth among general dental practitioners in Tunisia through an epidemiological survey and to propose recommendations for optimising this aesthetic procedure.

Methods: This descriptive cross-sectional observational study was conducted over a seven-month period, from October 2023, to April 2024, among a sample of randomly selected private-practice dentists distributed across Tunisia. Data were collected using a 19-item questionnaire developed to assess the frequency and protocols of external tooth bleaching, the techniques used, difficulties encountered, and dentists' satisfaction with immediate and long-term outcomes. The questionnaire was administered in both paper and electronic formats. Collected data were analyzed using SPSS version 25.0 and Microsoft Excel 2019. Both descriptive and analytical analyses were performed.

Results: Two hundred dentists responded to our questionnaire. Seventy-three percent of dentists performed external whitening once every 6 months. The least senior practitioners (79.5%) were the ones who performed the most whitening treatments. Natural ageing of the teeth is the most frequently indicated dyschromia (31.5%) in whitening. In-office whitening technique is the most commonly used (73.5%), with a concentration of over 32%. The occurrence of post-whitening sensitivities is encountered by 71% of dentists, 65% of whom apply a remineralising product post-whitening.

Conclusion: This survey provided an overview of external tooth bleaching practices among Tunisian private-practice dentists. In-office bleaching was the most frequently used technique. However, the occurrence of complications, particularly dental hypersensitivity, highlights the importance of appropriate case selection, prevention, and management of adverse effects. A thorough assessment of the etiology of tooth discoloration remains essential for selecting the most appropriate bleaching technique. The dissemination of evidence-based recommendations and continuing education should be encouraged to update practitioners' knowledge and improve the quality and safety of bleaching practices.

CO-216: BOTULINUM TOXIN TYPE A FOR BRUXISM MANAGEMENT: A SYSTEMATIC REVIEW OF RANDOMIZED CONTROLLED TRIALS

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Introduction: Bruxism management primarily aims to reduce masticatory muscle hyperactivity and associated pain. Botulinum toxin type A (BTX-A) has emerged as a potential therapeutic option, although its clinical benefit remains controversial. This systematic review assessed the effects of BTX-A on muscle activity, bruxism-related pain, and sleep quality.

Methods: A systematic literature search was conducted in PubMed®, Scopus, Web of Science, and the Cochrane Central Register of Controlled Trials (CENTRAL), from inception to February 1, 2024. Relevant studies were identified using terms related to bruxism and BTX-A combined with Boolean operators. Methodological quality was assessed using the Joanna Briggs Institute (JBI) critical appraisal tool. Muscle activity and pain were considered primary outcomes, while sleep quality was a secondary outcome.

Results: Twelve studies were included; 10 were considered at low risk of bias and 2 at moderate risk. BTX-A was mainly administered bilaterally into the masseter, temporalis, and/or medial pterygoid muscles, with comparisons involving placebo, occlusal splints, or conventional treatments. Six studies reported reduced masticatory muscle activity assessed by rhythmic masticatory muscle activity (RMMA) and/or electromyography (EMG). Three studies demonstrated a significant reduction in muscle pain. One study also reported improved sleep quality.

Conclusion: BTX-A may reduce masticatory muscle activity and bruxism-related pain. However, substantial variability in injection protocols and outcome assessment **Methods** limits direct comparison across studies. Larger randomized controlled trials with longer follow-up periods and evaluation of repeated injection protocols are warranted to better establish the therapeutic role of BTX-A in bruxism.

CO-217: EFFICACY OF LOW-LEVEL LASER THERAPY IN THE MANAGEMENT OF BURNING MOUTH SYNDROME: A SYSTEMATIC REVIEW

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Introduction: Burning mouth syndrome (BMS) is a chronic oral pain disorder for which effective treatment remains challenging. Low-level laser therapy (LLLT) has been proposed as a non-invasive therapeutic option, although its clinical efficacy remains uncertain. This systematic review aimed to evaluate the available evidence regarding the effectiveness of LLLT in reducing BMS-related pain and burning symptoms.

Methods: PubMed, Scopus, Web of Science, and the Cochrane Central Register of Controlled Trials were searched from inception through March 28, 2023. The search strategy combined controlled vocabulary and keywords related to BMS and laser therapy. Study selection and data extraction were independently performed by two reviewers, with disagreements resolved by a third reviewer when necessary. Methodological quality was assessed using the Joanna Briggs Institute critical appraisal tool. Pain reduction was the primary outcome.

Results: Of 21 records initially considered eligible, 12 were excluded following full-text assessment, leaving 9 studies for the final analysis. Overall, 66% of the included studies

demonstrated a low risk of bias. Compared with placebo, five studies reported a significant reduction in pain and/or burning symptoms following LLLT. In two studies, this benefit remained evident at both 2- and 4-month follow-up assessments.

Conclusion: Current evidence suggests that LLLT may provide symptomatic benefit for patients with BMS, particularly in reducing pain and burning sensations. However, heterogeneity in study methodology and outcome assessment limits the strength of the available evidence. Further well-designed studies using standardized treatment protocols, outcome measures, and appropriate placebo controls are warranted.

CO-218: DIAGNOSTIC PERFORMANCE OF CHATGPT-4 IN THE ASSESSMENT OF ORAL LESIONS FROM CLINICAL PHOTOGRAPHS

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Introduction: ChatGPT-4 is a large language model capable of interpreting clinical information and images. It may represent a potential decision-support tool in oral diagnosis. This study aimed to evaluate its ability to identify oral lesions from clinical photographs and to assess whether providing additional clinical information improves diagnostic accuracy.

Methods: Clinical photographs of oral mucosal lesions with histopathologically confirmed diagnoses were selected. Lesions were categorized according to color, elementary lesion, and disease type. Each photograph was independently submitted to ChatGPT-4 for diagnostic interpretation and treatment recommendations. Two experienced oral pathologists assessed lesion complexity and the concordance between ChatGPT-4 responses and established diagnoses using a five-point Likert scale. For cases initially misdiagnosed, relevant clinical information was subsequently added, and ChatGPT-4 was prompted to reassess the same cases.

Results: Thirty-four photographs were included. ChatGPT-4 correctly diagnosed 14 lesions (38.2%) based on photographs alone. After adding clinical information to 21 cases, diagnostic accuracy increased to 79.4%, with a statistically significant difference ($p < 0.01$). No significant correlation was found between diagnostic accuracy and lesion complexity ($r = -0.263$). ChatGPT-4 achieved 100% accuracy for speckled lesions, malignant tumors, and oral potentially malignant disorders.

Conclusion: ChatGPT-4 showed promising diagnostic performance in the assessment of oral lesions, particularly when clinical information complemented photographic findings. It may assist dentists in identifying suspicious oral mucosal lesions but should be considered a supportive tool and not a substitute for clinical expertise.

CO-219: DENTAL ANXIETY AND ORAL HEALTH: A CROSS-SECTIONAL STUDY

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Introduction: Dental anxiety (DA) is a common psychological response that can adversely affect oral health-related quality of life (OHRQoL). Despite their dental training, students may

still experience significant anxiety, potentially affecting their well-being and clinical performance. This study investigated the relationship between DA and OHRQoL among undergraduate dental students in Tunisia, as well as the influence of personality traits, demographic characteristics, and academic year.

Methods: A cross-sectional survey was conducted in March 2025 among 380 undergraduate students from all five academic years at the Faculty of Dental Medicine, University of Monastir. An online questionnaire assessed DA using the Dental Anxiety Scale-Revised (DAS-R), OHRQoL using the Oral Health Impact Profile-14 (OHIP-14), personality traits, oral hygiene behaviors, and demographic characteristics. Data were analyzed using descriptive statistics, chi-square tests, ANOVA, and multinomial logistic regression.

Results: Low, moderate, and high levels of DA were reported by 61.6%, 26.6%, and 11.8% of students, respectively. Increasing DA was associated with poorer OHRQoL. Female gender, higher neuroticism, and enrollment in earlier academic years were significant predictors of greater DA, whereas place of upbringing showed no significant association.

Conclusion: Dental anxiety is significantly associated with poorer OHRQoL among Tunisian dental students and is influenced by psychological and academic factors. Early identification and targeted interventions may help improve students' well-being, reduce anxiety, and enhance their quality of life.

CO-220: ANTIBIOTIC PRESCRIBING PRACTICES AMONG TUNISIAN DENTISTS: AN OBSERVATIONAL STUDY

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Introduction: In the context of increasing antibiotic resistance, antibiotic prescribing should be evidence-based and restricted to well-defined indications in accordance with international guidelines. This study aimed to assess the knowledge, attitudes, and practices (KAP) of Tunisian dentists regarding antibiotic prescribing.

Methods: A descriptive cross-sectional observational study was conducted using a 27-item, self-administered online KAP questionnaire divided into four sections. Data were analyzed using IBM SPSS Statistics version 22.

Results: A total of 482 Tunisian dentists participated. Most respondents (94.4%) demonstrated low to moderate knowledge of antibiotic prophylaxis and curative antibiotic therapy. Knowledge levels were significantly associated with age and year of graduation. Although 98.8% of participants were aware of antibiotic resistance, 52.7% considered their knowledge of antibiotic prescribing insufficient. The main reason reported for inappropriate antibiotic prescribing was "just in case, to avoid complications." Antibiotic treatment failure had been encountered by 60.2% of practitioners. Most participants (72.4%) had never received specific training in antibiotic prescribing, with 78.6% relying primarily on knowledge acquired during university education. Amoxicillin was the most frequently prescribed first-line antibiotic. Importantly, 82.2% of dentists expressed a willingness to receive further training.

Conclusion: This study highlights significant gaps between current antibiotic prescribing practices among Tunisian dentists and evidence-based recommendations. Strengthening continuing education and implementing targeted antimicrobial stewardship strategies are essential to promote rational antibiotic use and reduce dentists' contribution to antimicrobial

resistance

CO-221: PREVALENCE OF IMPACTED CANINES: A RADIOGRAPHIC STUDY BASED ON ORTHOPANTOMOGRAMS IN A NORTH AFRICAN P

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Introduction: Canines are essential to maintaining functional occlusion and facial aesthetics. Their role may be compromised by canine impaction (CI), a common developmental dental anomaly. This study aimed to assess the prevalence, distribution, and clinical-radiographic characteristics of CI in a Tunisian population.

Methods: A retrospective descriptive study was conducted in the Department of Dental Medicine at Fattouma Bourguiba Hospital, Monastir, Tunisia. Patients aged 14 years or older who attended the department between January 2013 and December 2022 were included. Orthopantomograms were reviewed to identify impacted canines. Impacted maxillary canines were categorized according to their direction and anatomical position using a validated classification system. Associated pathological conditions were also documented.

Results: Of the 6462 orthopantomograms examined, 136 patients (2.1%) had at least one impacted canine. Females accounted for 68.4% of cases and males for 31.6%, with no statistically significant sex difference ($p=0.08$). A total of 167 impacted canines were identified, with a significant predominance in the maxilla (73%) compared with the mandible (10.5%) ($p<0.01$). No significant difference was observed between the right and left sides ($p=0.84$). Unilateral impaction was most frequent (79.4%). Among maxillary impactions, types II and IV were predominant (33.5%). One follicular cyst and 12 cases of canine transmigration were reported.

Conclusion: Canine impaction is a relatively frequent dental anomaly. Early clinical and radiographic assessment is crucial for timely diagnosis and appropriate management, particularly for impacted maxillary canines.

CO-222: DIAGNOSTIC PERFORMANCE OF CHATGPT-5.5 IN IDENTIFYING CERVICOFACIAL CELLULITIS SPREAD FROM CLINICAL

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Introduction: Cervicofacial cellulitis is a serious odontogenic infection requiring diagnosis and assessment of its extent. This pilot study evaluated the ability of ChatGPT-5.5 to identify cervicofacial cellulitis and distinguish localized from diffuse involvement using clinical photographs.

Methods: Fifty-one patients with diagnosed cervicofacial cellulitis were included, providing 77 photographs from Sahloul Hospital, Sousse, Tunisia. ChatGPT-5.5 was evaluated using sequential prompts. It was first asked to identify cervicofacial cellulitis and, when identified, to classify it as localized or diffuse. It was then asked to identify involved anatomical regions and assess the need for computed tomography. Responses were compared with clinical assessments by three

oral surgeons. Diagnostic performance was evaluated using accuracy, sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV); agreement was assessed using Cohen's kappa (κ).

Results: Among the 51 cases, 34 (66.7%) were localized and 17 (33.3%) were diffuse. ChatGPT-5.5 provided a localized/diffuse classification in 50 cases. It correctly identified 13/17 diffuse cases (sensitivity, 76.5%) and 21/33 localized cases (specificity, 63.6%). Accuracy was 68.0%, with a PPV of 52.0%, NPV of 84.0%, and κ of 0.36, indicating fair agreement with the clinical assessment. In one case (2.0%), ChatGPT-5.5 failed to identify cellulitis and consequently did not provide an extent classification.

Conclusion: ChatGPT-5.5 demonstrated moderate sensitivity but limited specificity in distinguishing localized from diffuse cervicofacial cellulitis from clinical photographs. Its high NPV suggests potential as an adjunctive assessment tool; however, limited agreement and one non-diagnostic response highlight the need for clinical evaluation. Further studies using standardized datasets are warranted.

CO-223: RELATIVE DIMENSIONS OF ANTERIOR TEETH: A CROSS-SECTIONAL STUDY IN TUNISIA

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Introduction: The constant increase in esthetic demands, has led to the development of guidelines for predicting ideal tooth proportions. Understanding the relative dimensions of anterior teeth is essential for achieving optimal restorative and prosthetic outcomes. This study aimed to evaluate the relative dimensions and proportions of maxillary anterior teeth in Tunisia.

Methods: An observational cross-sectional study was conducted at the Department of Fixed Prosthodontics, Dental Clinic of Monastir, Tunisia. Only those with fully intact anterior dentition were enrolled. Individuals presenting with diastemas or dental crowding were excluded. Alginate impressions were obtained, and the perceived mesiodistal widths, crown lengths, and width-to-length ratios of the anterior teeth were measured on stone casts using a digital caliper. Statistical analyses were performed to assess differences in tooth dimensions according to sex and to evaluate the relative width-to-length ratios of the anterior teeth. The significance level was set at $p < 0.05$.

Results: A total of 100 participants were included, comprising 21 males and 79 females. The maxillary central incisors exhibited the greatest mean crown width (8.60 ± 0.58 mm) and mean crown length (9.71 ± 1.14 mm), with a mean width-to-length ratio of 0.89 ± 0.09 . No statistically significant differences in anterior tooth dimensions were observed between males and females ($p > 0.05$). Significant differences were observed in the relative width ratios among the maxillary central incisors, lateral incisors, and canines ($p < 0.001$).

Conclusion: Anterior tooth dimensions and their relative width ratios display specific population-dependent variations in this Tunisian cohort. Standardized mathematical proportions should be applied with caution, and individual dimensional relationships must be considered during esthetic treatment planning.

CO-224: WHEN RESOURCES ARE LIMITED: ETHICAL DILEMMAS AND CLINICAL PRACTICES IN HOSPITAL ENDODONTICS—A KAP ST

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Introduction: Material shortages in public hospitals may force dentists to make difficult clinical decisions, potentially creating conflicts between the provision of immediate care and ethical standards. This study aimed to assess the knowledge, attitudes, and practices of dentists regarding ethical dilemmas encountered in hospital endodontics under material constraints.

Methods: A descriptive cross-sectional Knowledge, Attitudes, and Practices (KAP) survey was conducted among dentists practicing endodontics in the Tunisian public hospital sector. Participants were recruited through non-probabilistic convenience sampling and voluntarily completed an anonymous self-administered online questionnaire distributed via Google Forms. Data were analysed descriptively using frequencies and percentages.

Results: Fifty-eight dentists participated. Overall, 77.2% correctly identified an ethical dilemma as a conflict between two moral obligations, while 59.6% considered an incomplete endodontic treatment performed because of inadequate equipment to be ethically problematic. Despite this ethical awareness, 54.4% reported doing their best with the available resources to ensure immediate patient care when referral to private practice was not feasible for financial reasons. Furthermore, 80.7% had performed endodontic treatment under suboptimal conditions, and 58.6% referred patients to the private sector only as a last resort. Importantly, 71.9% reported frequent conflict between their professional values and hospital working conditions.

Conclusion: Material constraints in hospital endodontics appear to create a gap between ethical awareness and clinical practice, generating recurrent moral tensions among practitioners. The development of standardized institutional protocols, together with stronger ethical training and organizational support, may help guide clinical decision-making and promote ethically sound patient care in resource-constrained settings.

CO-225: EFFECTS OF DIAPHRAGMATIC BREATHING ON SLEEP BRUXISM AND SLEEP QUALITY IN ADULTS: A RANDOMIZED CONTROLLED TRIAL

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Introduction: Sleep bruxism is a prevalent sleep-related movement disorder associated with tooth wear, oro-facial pain, and impaired sleep quality. Given the role of autonomic and psychological factors in its pathophysiology, diaphragmatic breathing may represent a simple non-pharmacological intervention. This randomized controlled trial evaluated the effects of a four-week diaphragmatic breathing program on sleep bruxism frequency, oro-facial pain, and sleep quality in adults.

Methods: A single-blind, randomized controlled trial was conducted among 96 adults with clinically diagnosed sleep bruxism. Participants were randomly assigned to a

diaphragmatic breathing group or a placebo control group (n = 48 per group). The intervention consisted of 10-minute daily diaphragmatic breathing sessions, five days per week, for four weeks. The control group received a neutral music intervention with the same frequency and duration. Sleep bruxism was assessed using a self-administered questionnaire inspired by the Standardised Tool for the Assessment of Bruxism (STAB). Sleep quality and oro-facial pain were assessed using the Pittsburgh Sleep Quality Index (PSQI) and a Visual Analogue Scale (VAS), respectively. The primary outcome was

Results: Ninety-six participants were randomized and included in the analysis (48 per group). The primary outcome showed a higher proportion of responders in the diaphragmatic breathing group than in the placebo group (20.8% vs. 12.5%; absolute difference: 8.3%, 95% CI: -6.5% to 23.1%; relative risk: 1.67, 95% CI: 0.70–3.97); however, the difference was not statistically significant. Orofacial pain remained low in both groups, with no significant between-group difference at post-intervention (mean VAS: 0.50 ± 1.19 vs. 0.79 ± 1.40; p = 0.273). Sleep quality was significantly better in the diaphragmatic breathing group at post-intervention, with lower PSQI scores compared with the placebo group (6.81 ± 2.37 vs. 8.19 ± 2.77; mean difference: 1.38 ± 0.53, 95% CI: 0.33–2.42; p = 0.010).

Conclusion: A four-week diaphragmatic breathing program showed a non-significant trend toward a higher response rate for sleep bruxism and did not significantly reduce orofacial pain. However, lower PSQI scores were observed in the diaphragmatic breathing group at post-intervention. Given the baseline between-group difference in sleep quality, these findings should be interpreted cautiously. Larger randomized trials with baseline-adjusted analyses and longer follow-up are needed to determine the effectiveness of diaphragmatic breathing in the management of sleep bruxism.

CO-226: FROM KNOWLEDGE TO PRACTICE: INITIAL MEDICAL CERTIFICATES AMONG TUNISIAN DENTISTS

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Introduction: The initial medical certificate (IMC) is a key medico-legal document that may have important consequences for patient rights and professional liability. Dentists play a central role in documenting oro-facial injuries; however, inadequate medico-legal training may compromise the quality and consistency of certificate writing. This study assessed the knowledge, attitudes, and practices of Tunisian dentists regarding the preparation of initial medical certificates.

Methods: A descriptive cross-sectional Knowledge, Attitudes, and Practices (KAP) study was conducted among dentists practicing in Tunisia between July and November 2025. Participants were recruited through a voluntary convenience sampling method. Data were collected using an anonymous self-administered online questionnaire exploring socio-professional characteristics and dentists' knowledge, attitudes, and practices regarding the preparation of initial medical certificates. Descriptive statistics were used to summarize the data.

Results: Eighty-two dentists participated in the study. Only 20.7% reported having received specific training in medical certificate writing. Most respondents recognized the medico-legal value of the IMC and correctly identified its essential components. However, important uncertainties remained regarding patient consent and the management of police

requests. Although 91.5% reported estimating total temporary incapacity objectively according to observed injuries, only 46.2% systematically reported preparing the certificate after a clinical examination. Ethical attitudes were generally appropriate, with 96.3% reporting that they would refuse or negotiate a request for an unjustified exaggerated certificate. In practice, 78.2% had previously issued an IMC, while certificate preparation remained heterogeneous: 68.3% systematically retained a copy in the patient record, 46.9% used a standardized template, and 38.3% reported free writing or a combination of approaches. Furthermore, 14.6% had experienced external pressure to modify a certificate

Conclusion: Tunisian dentists demonstrate generally satisfactory theoretical knowledge and ethically appropriate attitudes regarding initial medical certificates. However, limited formal training, persistent legal uncertainties, and heterogeneous clinical practices reveal a gap between medico-legal principles and their consistent implementation. Structured undergraduate and continuing education, together with standardized guidelines and practical templates, may help improve the quality, traceability, and legal security of initial medical certificates in dental practice.

CO-227: ENDODONTIC INSTRUMENT FRACTURE AND ETHICAL DECISION-MAKING: A KAP STUDY IN TUNISIA

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Introduction: Endodontic instrument fracture is a recognized procedural complication that may occur despite appropriate clinical precautions. Beyond its technical management, this event raises important ethical issues involving patient autonomy, informed consent, transparency, professional responsibility, and communication of adverse events. This study aimed to assess the knowledge, attitudes, and practices (KAP) of Tunisian dentists regarding the ethical management of endodontic instrument fracture and to identify potential gaps between ethical principles and clinical practice.

Methods: A descriptive cross-sectional KAP survey was conducted among dentists practicing endodontics in Tunisia. Data were collected from August 1 to September 1, 2025, using an anonymous, self-administered online questionnaire. The questionnaire explored socio-professional characteristics, knowledge of instrument fracture and its professional implications, attitudes toward disclosure and transparency, and self-reported practices following instrument fracture. The questionnaire was pre-tested for clarity and coherence. Data were analyzed descriptively using frequencies, percentages, and means. Participation was voluntary and anonymous. Ethical approval was sought from the Ethics Committee of the Faculty of Dental Medicine of Monastir (No. 2025033)

Results: A total of 108 dentists participated. Most respondents considered instrument fracture a complication that may occur despite appropriate precautions (86.1%), and 70.4% considered disclosure to the patient mandatory. However, only 60.7% reported awareness of official recommendations, while 52.3% believed that instrument fracture could engage professional responsibility. Although 91.6% considered transparency a fundamental ethical duty, 62.9% believed that disclosure could harm the dentist-patient relationship, 90.7% feared that patients might interpret the event as professional negligence,

and 46.2% acknowledged that fear of judgment or litigation could influence disclosure.

In practice, 87.0% had previously experienced instrument fracture. Among respondents who answered the disclosure question, only 58.5% reported informing the patient immediately. Furthermore, 72.2% did not routinely inform patients about this risk or obtain specific consent before endodontic treatment. Conversely, 93.5% reported documenting the incident in the patient's record.

Conclusion: This study reveals a gap between ethical recognition and clinical implementation in the management of endodontic instrument fracture. Although most dentists endorse transparency and patient disclosure as ethical principles, fear of damaging the therapeutic relationship, professional judgment, or litigation may limit their consistent application. The low rate of preoperative discussion of this risk represents an important ethical weakness. These findings support the need for ethical and medico-legal training, standardized informed-consent and disclosure protocols, and continuing education to promote transparent communication and ethically sound endodontic care.

MÉDECINE DU TRAVAIL

CO-228: DURATION OF SHIFT WORK EXPOSURE AND METABOLIC SYNDROME: A SYSTEMATIC REVIEW OF THE DOSE-RESPONSE REL

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Introduction: Shift work involving night shifts disrupts circadian regulation of glucose, lipid and cortisol homeostasis. Its association with metabolic syndrome (MetS) is established, but whether risk increases progressively with cumulative years of exposure remains debated. A graded relationship would justify seniority-based medical surveillance. This review synthesised evidence on the relationship between shift work duration and MetS risk, and mapped available data from North African working populations.

Methods: We searched PubMed from January 2015 to August 2026, crossing the MeSH terms Shift Work Schedule and Metabolic Syndrome with duration-related keywords, and hand-searched three meta-analyses. Studies qualified if exposure was shift work including nights, fixed or rotating, and if they reported an effect estimate by years or seniority. Outcomes accepted were MetS or a closely related cardiometabolic cluster. We screened 119 records and retained nine.

Results: Three meta-analyses reported pooled odds ratios of 1.35 (1.24–1.48) overall and 2.17 (1.31–3.60) among healthcare workers, with substantial heterogeneity ($I^2=82\%$). Pooled dose-response estimates were 1.07 (1.05–1.09) at five years and 1.11 (1.06–1.15) at ten years. Primary study estimates ranged from 1.03 (0.94–1.12) to 3.50 (1.30–9.00). A large biobank cohort showed a significant gradient across exposure duration and cumulative night count (highest category HR 1.36, 1.25–1.48; $p\text{-trend}<0.001$), whereas a four-year cohort reported OR 2.08 beyond twenty years without a significant trend. Gradients appeared steeper in women. Exposure metrics were inconsistent and healthy-worker survivor bias rarely addressed. Only one North African study compared shift and day workers; no Moroccan data stratified by seniority.

Conclusion: Evidence supports a graded association between

shift work duration and MetS, but inconsistent exposure metrics and unaddressed survivor bias preclude firm dose-response **Conclusions.** Longitudinal North African studies using objective, register-based exposure data are needed to guide seniority-adapted medical surveillance of shift workers.

CO-229: ARTIFICIAL INTELLIGENCE FOR OCCUPATIONAL RISK PREVENTION: AN UMBRELLA REVIEW OF SYSTEMATIC REVIEWS

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Introduction: Artificial intelligence is proposed at every stage of occupational risk prevention, and systematic reviews of it have accumulated faster than the primary evidence they summarise. These reviews overlap, apply different standards, and report different endpoints. We examined what this body of review evidence establishes about worker health outcomes, as distinct from algorithm performance.

Methods: PubMed was searched from January 2020 to August 2026 for systematic and scoping reviews pairing artificial intelligence or machine learning with occupational safety, workplace injury or risk prevention. Protocols, primary studies, and reviews restricted to clinical or rehabilitation settings were excluded. For each review we recorded the databases searched, the number of primary studies and their overlap, the sector, the class of application, the endpoint measured, and whether the primary evidence had been quality-appraised. Of 165 records screened, 15 reviews were retained.

Results: Applications clustered into computer vision for protective equipment and unsafe behaviour, risk prediction from incident registries, text mining of accident narratives, and wearable sensing for ergonomic exposure. Construction and manufacturing supplied most primary studies; agriculture, mining and radiation work appeared in one review each. Reported algorithm performance was uniformly favourable, exceeding 90% accuracy in most vision-based applications. Endpoints were almost entirely technical, and no review pooled estimates, the metrics being incommensurable. A single review addressed whether these tools affect worker injury or illness: it identified one study of moderate quality, a chatbot that improved musculoskeletal symptoms.

Conclusion: Sixteen reviews describe a literature that measures detection, not prevention. One study of acceptable quality has tested whether these tools change health outcomes, which makes routine adoption premature. Field evaluations with injury endpoints, rather than benchmark accuracy, should precede their **Introduction** into occupational health practice. Restriction to a single biomedical database may have under-represented reviews published in engineering journals.

CO-230: NURSES' KNOWLEDGE, ATTITUDE, PRACTICE AND ASSOCIATED FACTORS ON BIOMEDICAL WASTE MANAGEMENT IN SFAX

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Introduction: During the healthcare delivery process, generation of biomedical waste is an unavoidable outcome of hospitals and healthcare facilities. Biomedical waste management is a complex process that requires proper procedures to create safe work environment and ensure the safety of patients.

Aim: To assess nurses' knowledge, attitude, and practice about biomedical waste management and associated factors in University Hospitals of Sfax.

Methods: This cross-sectional study was conducted among 150 nurses from different departments at the University Hospitals of Sfax (Hedi Chaker and Habib Bourguiba). Data were collected using a structured, self-administered questionnaire consisted of four sections addressing nurses' general characteristics, knowledge, attitudes, and practices regarding biomedical waste management.

Results: The **Results** showed that 86% of nurses had adequate knowledge, whereby associated factors were age ($p=0.017$), seniority ($p=0.012$), basic training ($p=0.011$), practice score ($p=0.001$) and attitude score ($p=0.005$). Practice was adequate among 54% of nurses, whereby associated factors were training ($p=0.036$), education level ($p=0.025$), basic training ($p=0.045$), interest in training ($p=0.019$) and knowledge score ($p=0.001$). Attitude was positive amid 54% of nurses. Significant and positive correlation was found between knowledge and attitude ($p=0.005$; $r=0.229$).

Conclusion: This study has highlighted gaps in nurses' knowledge, attitudes and practices and influencing factors

CO-231: CLINICAL PROFILE AND OCCUPATIONAL EXPOSURES IN WORKERS WITH BLADDER TUMORS

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Introduction: Occupational exposure to various carcinogenic agents—including aromatic amines, polycyclic aromatic hydrocarbons, silica, tar, solvents, pesticides, and certain metals—represents a well-established risk factor for bladder cancer, often acting synergistically with smoking.

Methods: This was a single-center descriptive study including 41 workers followed for bladder tumors at the urology department of Habib Thameur Hospital, Tunis. Occupational exposure to at-risk agents (polycyclic aromatic hydrocarbons, silica, heavy metals, solvents, pesticides, coal tar, and aromatic amines) was assessed through structured telephone interviews. Clinical and pathological data were collected from hospital medical records.

Results: The study population showed a marked male predominance (sex ratio 9.25), with a mean age of 64.7 ± 9.7 years and a mean occupational seniority of 28.0 ± 8.3 years. Personal medical history was reported in 43.9% of patients, family history of bladder cancer in 7.3%, and family history of cancer at any site in 22%. Smoking was reported by 85.4% of patients, with a mean consumption of 38.7 ± 21 pack-years; exposure to wood smoke was reported in 15% and to hookah smoking in 2.4%. The main occupational exposures identified were polycyclic aromatic hydrocarbons (17.1%), silica (26.8%), pesticides (12.2%), aromatic amines (12.2%), heavy metals (7.3%), solvents (4.9%), and coal tar (2.4%). The most represented at-risk sectors were construction (19.5%), transportation, and agriculture (14.6%). Substantial occupational exposure without adequate protection was noted in 36.6% of workers, and combined occupational exposure—smoking in 22%. Tumor discovery was mostly symptomatic

(95.1%). Urothelial carcinomas predominated (92.7%), with 97.6% being high-grade tumors, most frequently located at the trigone (70.7%) and lateral bladder walls (63.4%).

Conclusion: Regular medical surveillance of workers exposed to carcinogens is essential for early detection of urological disease, alongside strengthened preventive measures, including improved collective protection and proper use of personal protective equipment.

CO-232: SAFETY CULTURE: HEALTHCARE PROFESSIONALS' ATTITUDES IN SFAK UNIVERSITY HOSPITALS

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Introduction: Patient safety aims to minimize the risk of harm associated with healthcare. It relies on a positive safety culture, reflected in healthcare professionals' attitudes, behaviors, and commitment to safe practices.

Aim: To assess healthcare professionals' attitudes toward patient safety culture in the University Hospitals of Sfax and to identify the factors associated with these attitudes.

Methods: A cross-sectional study was conducted among 161 healthcare professionals, including physicians, nurses, and technicians, working in different departments of the two University Hospitals of Sfax. Data were collected using the Safety Attitudes Questionnaire-Intensive Care Unit (SAQ-ICU), which assesses six dimensions: teamwork climate, safety climate, job satisfaction, stress recognition, perceptions of management, and working conditions, along with a socio-demographic questionnaire.

Results: The highest proportion of positive attitudes was observed for stress recognition (44.1%, n=71), while the lowest was observed for perceptions of management (6.2%, n=10). Binary logistic regression showed that positive safety culture attitudes were significantly associated with age (OR=1.123; 95% CI: 0.982–1.284; p=0.009), gender (OR=0.34; 95% CI: 0.156–0.724; p=0.005), professional seniority (OR=0.86; 95% CI: 0.750–0.994; p=0.041), job satisfaction score (OR=1.019; 95% CI: 1.002–1.037; p=0.030), and compliance with safety culture measures in the workplace (OR=7.134; 95% CI: 2.932–17.361; p<0.001).

Conclusion: This study highlighted important gaps in healthcare professionals' safety culture attitudes and identified several associated factors. Targeted educational and organizational interventions are needed to strengthen safety culture and reduce healthcare-related risks to patients and professionals.

CO-233: TYPOLOGY OF ARTIFICIAL INTELLIGENCE USE IN NURSING PRACTICE: A NATIONAL TUNISIAN STUDY

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Introduction: While nurses' knowledge and attitudes toward artificial intelligence (AI) have been widely studied, how they use these tools in their daily practice remains poorly documented in Tunisia. This study aimed to describe the typology of AI use among Tunisian nurses and to characterize how generative AI is used for professional writing tasks.

Methods: We conducted a national, cross-sectional, descriptive and analytical study among nurses working in both public and private sectors in Tunisia, over a three-month period (October–December 2025). Data were collected through an anonymous online self-administered questionnaire (Google Forms), shared via social media and a QR code, using a convenience sampling method. Variables collected included the types of AI tools used, the specific clinical functions for which they were mobilized (checking drug interactions, calculating dosages, clinical monitoring, alerts on adverse effects), prior use of AI for drafting professional documents, and self-assessed proficiency on a 1-to-10 scale. Statistical analyses were performed using SPSS version 23.

Results: A total of 227 nurses took part in the study (mean age 34.08 ± 8.52 years; 63% women). AI was mainly used for medical research on a given condition (38%), followed by checking drug interactions and calculating dosages (14% each), and information on treatment storage and administration (12%). Automated clinical monitoring functions remained marginal, with alerts on vital signs and adverse effects each cited by only 6% of respondents. Self-assessed proficiency was moderate ($5.49 \pm 2.59/10$). The vast majority (80.2%) reported using ChatGPT, and among them, 68% used it to help draft professional documents — mainly for information search (27.8%) and text rephrasing (26.9%), while fully drafting a manuscript remained rare (3.1%).

Conclusion: AI use among Tunisian nurses is still largely limited to information-seeking and writing assistance, while clinical monitoring and decision-support functions remain underused. These findings point to the need for targeted training programs steering AI use toward higher-value clinical applications.

CO-234: FACTORS ASSOCIATED WITH SLEEP QUALITY AND DISTURBANCES AMONG MEDICAL SCIENCE STUDENTS IN TLEMCEIN

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Introduction: Sleep is essential for optimal physical and psychological functioning. However, medical science students are particularly vulnerable to sleep disturbances due to academic demands, psychological stress, lifestyle habits, and environmental factors. Poor sleep quality may adversely affect well-being, concentration, and academic performance.

This study aimed to assess sleep quality and disturbances and identify associated factors among medical science students at the Faculty of Medicine of Tlemcen, particularly stress, lifestyle, environmental, and sociodemographic factors.

Methods: A cross-sectional study was conducted among medical science students during the 2024–2025 academic year

using a self-administered questionnaire. Data were analyzed using SPSS software.

Results: Among the 473 students surveyed, 73.9% were female, with a mean age of 24 years. Overall, 58.8% reported symptoms of insomnia. Sleep disturbances were significantly associated with high perceived stress ($p < 0.001$), the presence of light in the bedroom ($p = 0.01$), shared sleeping arrangements ($p = 0.01$), lack of regular physical activity ($p = 0.03$), shift or night work ($p = 0.01$), bruxism ($p < 0.001$), and the absence of relaxation practices ($p = 0.04$).

Conclusion: Sleep disturbances are common among medical science students in Tlemcen and are significantly associated with psychological stress, lifestyle habits, environmental conditions, and academic demands. These findings highlight the need for targeted educational and preventive interventions to promote healthy sleep habits and support students' well-being and academic functioning.

CO-235: OUTCOMES AND FACTORS ASSOCIATED WITH SICKNESS ABSENCE FOLLOWING UPPER LIMB OCCUPATIONAL INJURIES

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Introduction: Return to work following Upper Limb occupational injuries (OIs) can be challenging and may result in prolonged work absence.

The aim of this study was to assess occupational outcomes among workers with upper limb OIs and to identify professional and injury-related factors associated with prolonged sickness absence.

Methods: We conducted a cross-sectional study among workers with upper limb OIs who attended the Permanent Partial Disability (PPD) assessment committee at the Sfax 1 branch of the Tunisian National Health Insurance Fund over a 9-month period, from October 2020. Sociodemographic, clinical, and occupational data were collected. For those who had not yet returned, the date of committee attendance was considered as the return date to estimate the duration of sickness absence.

Results: Ninety workers were included; 78.9% were men, with a mean age of 42.65 ± 9.69 years. Hand and wrist injuries were the most frequently affected sites (63%). At the time of the survey, six workers had not yet returned to work. The mean duration of sickness absence was 153.72 ± 163.06 days. Longer sickness absence was significantly associated with shoulder injuries ($p=0.030$), tendinopathies ($p=0.048$), surgical intervention ($p=0.042$), the number of functional rehabilitation sessions ($p<0.001$), the duration of immobilization ($p=0.025$), and the Permanent Partial Disability rate attributed to the injury ($p=0.030$).

Conclusion: Upper limb OIs may lead to prolonged work absence and unfavorable occupational outcomes. Particular attention should be paid to workers with shoulder injuries, tendinopathies, surgical treatment, prolonged immobilization, and extensive rehabilitation needs in order to facilitate timely and sustainable return to work.

CO-236: CERVICOBACHIAL NEURALGIA IN WORKERS WITH SHOULDER PAIN: PREVALENCE AND ASSOCIATED

FACTORS

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Introduction: Work-related shoulder pain, predominantly caused by rotator cuff disorders, accounts for a large proportion of occupational musculoskeletal disorders reported in Tunisia. Its frequent association with cervicobrachial neuralgia (CBN) may complicate differential diagnosis and occupational attribution.

Aim:

To estimate the prevalence of CBN among workers with painful shoulder and to identify factors associated with this condition.

Methods: A retrospective analytical observational study was conducted using medical assessment records from the Tunisian National Health Insurance Fund (CNAM) between 2013 and 2023. Workers with occupational painful shoulder were included. Sociodemographic, occupational, and clinical data were collected and analyzed using univariate and multivariate statistical **Methods**.

Results: A total of 323 patients with shoulder pain were included. The mean age was 45.3 ± 8.2 years, and 68.7% were women. Most participants (86.4%) were manual workers, mainly in the garment industry (39.3%). Mean occupational seniority was 19.1 ± 8.5 years, with 67.5% having more than 15 years of experience. The prevalence of CBN was 41.2%. Significant associations were found with age ≥ 50 years ($OR=1.79$; $p=0.027$), left-sided shoulder involvement ($OR=1.70$; $p=0.002$), and tendon tears on ultrasonography ($OR=1.15$; $p=0.025$). Previous rotator cuff surgery was also associated with an increased risk of CBN ($OR=3.55$; $p=0.005$).

Conclusion: CBN is common among workers with painful shoulder. Identifying associated factors may improve diagnostic assessment, management, and prevention.

CO-237: ERGONOMIC CONDITIONS ACCORDING TO TUNISIAN TELEWORKERS

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Introduction: The shift toward telework has raised concerns about the ergonomic conditions of home-based computer work. Assessing workstation characteristics and working practices is essential to identify potential ergonomic risks.

Aim: To assess self-reported ergonomic conditions among teleworkers.

Methods: A descriptive cross-sectional study was conducted among 104 active Tunisian teleworkers between September 2021 and July 2022. Ergonomic characteristics of computer-based work were assessed using a section adapted from Chapter 5 of the latest version of the INRS Musculoskeletal Disorders questionnaire to the telework context

Results: The 104 participants had a mean age of 33.06 ± 7.64 years and a sex ratio of 0.667. Most participants (73.1%) used a laptop for teleworking. The monitor was perceived to be below eye level by 41.3% of participants. The work surface was considered adequate by 81.7% of participants, and 75.0% reported an appropriate keyboard height. The keyboard was positioned directly in front of the user in 80.7% of cases. However, 27.0% of participants had no dedicated computer workstation at home, and 42.3% alternated between a workstation and potentially unsuitable locations such as a bed, sofa, or dining table. Regarding breaks, 58.7% reported taking breaks, although only 55 participants frequently or always left their workstation.

Conclusion: Although several workstation features were perceived as adequate, telework was characterized by frequent use of laptops, lack of dedicated workstations, and use of unsuitable work locations. These findings highlight the need for ergonomic guidance and prevention strategies specifically adapted to home-based work.

CO-238: OBSTRUCTIVE SLEEP APNOEA IN PROFESSIONAL DRIVERS A HIDDEN THREAT TO ROAD SAFETY AND WORK PERFORMANCE

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Introduction: Obstructive sleep apnoea syndrome (OSAS) is a major occupational health issue among professional drivers due to daytime sleepiness, impaired alertness, and increased road traffic accident risk.

Aim: To assess the risk of OSAS among professional drivers and investigate its associations with sociodemographic and occupational characteristics, daytime sleepiness, and work productivity.

Methods: A cross-sectional study was conducted among 104 professional drivers in the Sahel region of Tunisia. Sociodemographic, occupational, and medical data were collected using a standardized questionnaire. Daytime sleepiness was assessed using the Epworth Sleepiness Scale (ESS), with excessive daytime sleepiness defined as a score ≥ 11 . The risk of OSAS was assessed using the Berlin Questionnaire, with high risk defined as positivity in at least two categories. Occupational impairment was assessed using the Work Productivity and Activity Impairment-General Health (WPAI-GH) questionnaire.

Results: The mean age was 43.7 ± 9.3 years and the mean BMI was 27.8 ± 4.6 kg/m². Bus drivers accounted for 51% of participants, followed by truck drivers (28.8%), heavy equipment drivers (17.3%), and light vehicle drivers (2.9%). Most participants were married (78.8%) and worked in the private sector (56.7%). Night work was reported by 26.9% of participants, while 58.7% were current smokers. The mean ESS score was 3.8 ± 3.9 , with excessive daytime sleepiness (ESS ≥ 11) observed in 7.8% of participants. According to the Berlin Questionnaire, 41.3% were classified as being at high risk of OSAS. The high-risk group had significantly higher ESS scores ($p=0.001$) and a higher mean BMI ($p<0.001$). Overall work impairment measured by the WPAI-GH was significantly greater among high-risk drivers ($p=0.012$), as was impairment in daily activities ($p=0.015$). No significant associations were found between OSAS risk and age, seniority, driver type, or night work.

Conclusion: Overall, 41.3% of drivers were classified as being at high risk of OSAS. High risk was associated with higher BMI, increased daytime sleepiness, and greater occupational impairment. Systematic screening may improve road safety and occupational health.

CO-239: PREVALENCE OF CARDIOVASCULAR DISEASE RISK FACTORS IN HOSPITAL WORKERS : A BI-CENTRIC STUDY

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Introduction: This study aimed to assess the prevalence of cardiovascular disease risk factors among healthcare workers

Methods: This cross-sectional study was conducted in the teaching hospitals of Taher Sfar Mahdia and Mohamed Ben Sassi, Gabes in Tunisia over a year. A representative sample, matched by gender and work schedule, was calculated. In total, the sample consisted of 445 healthcare workers. Data collection involved the administration of a structured questionnaire by an occupational physician, covering socio-demographic and professional characteristics and medical history. Validated tools such as the Fageström test for nicotine dependence, AUDIT-C for alcohol consumption, the International Physical Activity Questionnaire (IPAQ) and the arabic version of the Modified Yale Food Addiction Scale were utilized. Physical examinations were conducted.

Results: Approximately half of respondents were nurses (45,1%) and more than seventy percent were female (71.71%). Among the participants, 11.76 % reported having diabetes, 14.57% had hypertension, and 5.6 % had dyslipidemia. Smoking prevalence was 15.13 %, while alcohol consumption was reported by 12.04 %, with 5.83 % identified as alcoholics. Clinical examinations indicated a mean BMI of 27.48, with 40.3 % classified as overweight, and a prevalence of high waist circumference at 19.89%. Elevated blood pressure was observed in 15.01 % of participants. A total of 126 participants (35,29 %) were regarded as having food addiction.

Conclusion: Risk factors for cardiovascular disease are prevalent among adults, particularly among healthcare professionals. Adopting a holistic, preventive approach is essential to improve the overall cardiovascular health of healthcare staff.

CO-240: QUALITY OF LIFE OF ADMINISTRATIVE STAFF AT

THE NATIONAL HEALTH INSURANCE FUND'S GABES AND GAFSA CENT

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Introduction: This study aimed to assess the determinants of quality of life among administrative staff at the National Health Insurance Fund in Gabes and Gafsa.

Methods: This is a multicenter cross-sectional study conducted comprehensively among administrative staff at the National Health Insurance Fund centers in Gabès City, Gabès South, Gafsa, and Metlaoui. The survey consisted of a french self-administered questionnaire covering sociodemographic and occupational characteristics. Three validated questionnaires were used to assess quality of life (SF-12), psychosocial risks (KARASEK) and the work-life balance (SWING).

Results: The study included 102 employees mean aged 45.62 ± 6.1 years, with a sex ratio of 0.85. Impaired mental quality of life (MCS < 47.96) was found in 57.8% of female employees, while good physical quality of life (PCS > 50.11) was observed in 26.5%. A high negative impact of work on personal life was found in 58.8% of employees. According to Karasek's model, Job strain was found in 25.7% of the participants.

Multivariate analysis using binary logistic regression showed that female gender (OR = 0.231; 95% CI [0.093–0.571]; $p = 0.002$), job strain (OR = 0.341; 95% CI [0.121–0.957]; $p = 0.041$), and an increase in the number of daily working hours (OR = 0.709; 95% CI [0.536–0.937]; $p = 0.015$) were factors independently associated with a decline in mental health-related quality of life. Furthermore, no factors were identified for physical quality of life.

Conclusion: These **Results** suggest the necessity of preventive measures and workplace health promotion interventions to reduce psychological demands, improving organizational flexibility, and fostering a better work-life balance in order to improve quality of life.

CO-241: WORK-HOME BALANCE AMONG PARAMEDICAL STAFF IN THE EMERGENCY DEPARTMENTS OF THREE TUNISIAN HOSPITALS

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Introduction: The Emergency departments (EDs) serve as a cornerstone of healthcare systems worldwide. ED paramedical staff face a distinct set of occupational challenges and often present challenges in balancing professional and family responsibilities. This study aims to evaluate the associated factors of Work-Home negative effects among paramedical staff in the emergency departments.

Methods: A multicentric cross-sectional study was carried out among paramedical professionals working at three emergency departments in Kasserine regional hospital, Taher Sfar Hospital, and Fatouma Bourguiba Hospital. An anonymous auto-administered questionnaire detailed sociodemographic and professional characteristics. The validated French version of the Work-Life Interface Questionnaire (SWING) was used to assess

the interaction between work and family life.

Results: We included 125 paramedical professionals, predominantly females (68.8%). The most prevalent age group was between 25 and 35 (73.6%), and the predominant professional category among the paramedics was nurses (62.4%). Among them, 55.2% have presented a negative Work-to-Home interaction, and 60.8% showed a negative Home-to-Work interaction. Multivariate analysis showed a significant association between negative Work-to-Home interaction and a higher number of night shifts during weekends (aOR=1.33; 95% CI [1.04;1.71]; $p=0.02$), a higher number of days with work hours exceeding 8h per week (aOR=1.14; 95% CI [1.01;1.3]; $p=0.04$), the presence of workplace bullying (aOR=4.22; 95% CI [1.71; 10.43]; $p = 0.003$) and self-reported physical or verbal WPV (aOR=0.25; 95% CI [0.10; 0.62]; $p=0.003$). Paramedical professionals using public transport as a commute mode (aOR=2.3; 95% CI [1.03; 2.16]; $p = 0.04$) and with a higher number of night shifts per month (aOR 1.15, 95% CI [1.08–1.22]; $p<10^{-3}$) were independently associated with higher odds of negative Home-to-Work interaction.

Conclusion: These findings highlight the complexity and intensity of the occupational tensions experienced by ED paramedical professionals, emphasizing the urgent need for institutional policies that promote flexible schedules, psychological support, and formal recognition of healthcare providers' contributions. Implementing work-life balance measures represents a promising and necessary approach for reducing occupational stress and enhancing job satisfaction.

CO-242: PATIENT-TO-WORKER VIOLENCE ON HOSPITAL CAREGIVERS: A CROSS SECTIONAL BICENTRIC TUNISIAN STUDY.

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Introduction: The aim of this study is to assess the prevalence and associated factors of patient-to-worker violence in two hospitals in the central-eastern region of Tunisia.

Methods: A cross-sectional bi-centric study was conducted in two teaching hospitals. This study included all healthcare workers of these hospitals. Data collection was performed by a structured self-administered questionnaire related to demographic and professional characteristics of participants. Participants were asked about violence where the perpetrators were patients using a questionnaire developed and validated by a Jordanian team to evaluate Violence. Beck's Depression Inventory II and Rosenberg self-esteem scale were chosen to explore self-esteem issues and mood disorders. The Fagerstrom test for nicotine dependence was used to assess cigarette dependence. The Internet addiction test was used to evaluate internet addiction.

Results: The response rate was of 19%. The mean age of the sample was 34.5 ± 9.6 years. In work sit, 46.9% (n=239) reported being exposed to at least one incident of patient-to-worker violence. Exposure to verbal violence was reported by 92.1% of workers. Among the sample, 18.9% of participants reported feelings of low self-esteem. Asked about depressive symptoms, appetite problems were reported in 77.1% of cases. A significant association was found between patient-to-worker violence,

nationality ($p=0.01$) and occupation ($p=0.01$) of respondents. **Results** showed also that patient-to-worker violence was significantly associated with smoking ($p=0.043$), the degree of cigarette addiction ($\leq 10-3$) and alcohol consumption ($p=0.008$). Mood disorders were associated to exposure to patient-to-worker violence. An increased risk to be exposure to incidents of physical violence was found among workers with depressive symptoms. Also, reporting physical violence was associated with self-esteem issues and feelings of worthlessness.

Conclusion: Violence has become an alarming hazard in hospitals. This study showed the association between different factors and the exposure to patient-to-worker violence incidents in two hospitals. In order to reduce patient-to-worker violence, urgent prevention programs should be incorporated in hospitals.

MÉDECINE INTERNE

CO-243: FAMILIAL BEHÇET'S DISEASE : CLINICAL PROFILE AND OUTCOMES IN A TUNISIAN COHORT

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Introduction: Familial forms of Behçet's disease (BD) combine probable genetic determinism with increased risk of visceral involvement, yet remain poorly described in Tunisia. Our aim is to describe the clinical, biological, therapeutic profile and evolution of familial BD in a Tunisian cohort.

Methods: Retrospective study at the internal medicine department in Sfax, including patients meeting international BD criteria with ≥ 1 first-degree affected relative, from 1996 to 2024. Demographic, clinical, biological, therapeutic, and outcome data were extracted from records.

Results: Among 343 BD patients, 21 had familial forms (prevalence 6.1%; 0.75 patient-years), mean age 35.4 ± 10.5 years, 71.4% male. All had recurrent oral aphthosis, revealing in 85.7%. Genital ulcers and pseudofolliculitis occurred in 85.7% and 71.4%, revealing in 38.1% each; erythema nodosum was rare. Pathergy test was positive in 28.6%; 33.3% smoked. Ocular involvement occurred in 28.6%, mostly uveitis/panuveitis, with 2 cataract cases. Joint involvement affected 42.9%. Neurological involvement occurred in 19.0% (headache, motor/sensory deficits, pyramidal signs); venous thrombosis in 23.8%, no digestive involvement. Pulmonary embolism was revealing in 9.5%. HLA-B51 was positive in 38.1%; mean ESR 19.4 ± 15.4 mm/h, CRP 7.2 ± 7.5 mg/L. All received colchicine; 57.1% received corticosteroids, 14.3% immunosuppressants. Overall evolution was favorable in 61.9%, partially favorable in 28.6%, sequelae in 23.8%, one death. Six had ocular relapses; 7 retained aphthosis after remission.

Conclusion: In this Tunisian cohort, familial BD showed male predominance, young onset, high mucocutaneous involvement, and notable ocular, neurological, thrombotic manifestations, warranting prolonged follow-up and monitoring of relatives.

CO-244: JUVENILE-ONSET BEHÇET'S DISEASE: A TUNISIAN PERSPECTIVE

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Introduction: Juvenile Behçet's disease (JBD) is a rare form of BD with clinical profiles distinct from adult-onset disease, and data remain scarce in North Africa. Our aim is to describe the clinical, biological, therapeutic characteristics and outcomes of JBD in a Tunisian cohort.

Methods: Retrospective observational study at our internal medicine department in Sfax, 1996-2024. Patients diagnosed with BD before age 16 per international criteria were included. Demographic, clinical, biological, and therapeutic data were collected from records.

Results: Among 343 BD patients, 7 had JBD (prevalence 2%; 1/4 patient-years), mean age 14.6 ± 0.5 years, marked male predominance (71.4%, M/F ratio 2.5:1). Median diagnostic delay was 18 months; no family history. Mucocutaneous manifestations included oral aphthosis (100%), genital ulcers (85.7%), pseudofolliculitis (85.7%), erythema nodosum (14.3%); pathergy test positive in 33.3%. Joint involvement occurred in 28.6%. Ocular manifestations occurred in 28.6%, revealing in one case, with severe bilateral involvement (panuveitis, retinitis, papillitis, maculopathy, episcleritis, cataract, optic atrophy) in another. One had revealing pulmonary embolism confirmed by CT angiography, treated with heparin. One developed orchitis; one had high fever. HLA-B51 was positive in 71.4%; mean ESR 25.7 ± 16.0 mm/h, CRP 25.7 ± 53.7 mg/L. All received colchicine, 57.1% corticosteroids, 16.7% immunosuppressants; duration ranged 15 days-192 months. Evolution was favorable in 85.7%, partially favorable in 14.3%, despite sequelae. Oral aphthosis persisted in 3 with relapses, absent in 2.

Conclusion: In this Tunisian cohort, JBD is rare but marked by near-constant mucocutaneous involvement, strong HLA-B51 positivity, and occasionally severe forms, warranting prolonged specialized follow-up.

CO-245: ANTI-MDA5 ANTIBODY-ASSOCIATED DERMATOMYOSITIS: DISTINCTIVE CUTANEOUS FEATURES

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Introduction: Anti-MDA5 antibody-associated dermatomyositis (DM) is a subtype of idiopathic inflammatory myopathies with a distinctive clinical and prognostic phenotype. Our aim is to describe epidemiological, clinical, therapeutic, and prognostic features of anti-MDA5 DM.

Methods: Retrospective study including patients diagnosed with DM per Bohan and Peter criteria with positive anti-MDA5 antibodies, from 1996-2023, at the internal medicine department, Hedi Chaker University Hospital, Sfax.

Results: Five patients with anti-MDA5 myositis were identified among 115 cases (4.3%): 3 men, 2 women, mean age 57 years (range 46-80). Myositis onset was subacute in all. Cutaneous signs in all patients included heliotrope rash, Gottron papules, scalp erythematous lesions, periungual erythema/telangiectasia, and deep ulcerations with thick crusts on elbows, knees, palms. Raynaud's occurred in 40%. Capillaroscopy showed reduced capillary density with tortuosities, no megacapillaries. Skin biopsy showed interface dermatitis with basal vacuolar degeneration. Joint involvement occurred in 60%, with synovitis in 2. All had myalgia; moderate weakness in 60% with elevated CPK. Dysphagia occurred once. Respiratory involvement, the most severe feature, included cough and hypoxemic dyspnea; CT

showed nonspecific interstitial pneumonia, fibrosing NSIP (non-specific interstitial pneumonia), and organizing pneumonia. Malignancy was confirmed once (prostate adenocarcinoma). All received high-dose corticosteroids; cyclophosphamide/rituximab in 40%. Respiratory deterioration occurred in 60%, causing 2 deaths; improvement occurred in 60%.

Conclusion: Anti-MDA5 antibodies appear to define a distinctive DM subtype featuring severe cutaneous lesions, including vasculopathy causing digital necrosis, with minimal or absent muscle involvement. Cutaneous ulceration should prompt anti-MDA5 testing and early aggressive treatment of rapidly progressive interstitial pneumonia.

CO-246: VOGT-KOYANAGI-HARADA DISEASE: OCULAR AND SYSTEMIC MANIFESTATIONS

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Introduction: Vogt-Koyanagi-Harada (VKH) disease is a rare multisystem inflammatory disorder that manifests essentially as bilateral granulomatous panuveitis, associated with serous retinal detachments and choroidal thickening. Extraocular manifestations, particularly neurological, auditory, and cutaneous, may also be observed.

The aim of our study was to describe the clinical, ophthalmological, therapeutic, and prognostic characteristics of patients with Vogt-Koyanagi-Harada disease.

Methods: This was a retrospective descriptive study that included patients with VKH, treated in an internal medicine department. Ophthalmological and extraocular manifestations, treatment modalities, and disease progression were recorded.

Results: Twenty-three patients were included in the study: 12 women and 11 men. The average age was 42.17 years. Extraocular manifestations included neurological involvement in 18 patients, hearing loss in 14 patients, and skin manifestations in nine patients. From an ophthalmological perspective, granulomatous panuveitis was observed in 12 patients, serous retinal detachment in 14 patients, choroidal thickening in four patients, and multifocal choroiditis in two cases. Cataracts were observed in nine patients.

All patients received corticosteroid therapy. Azathioprine was used in 20 patients, eight of whom had previously received courses of cyclophosphamide. Cyclosporine was used in nine patients.

During follow-up, 11 patients had a favorable outcome. A "sunset glow" appearance was observed in three patients, secondary optic atrophy in one case, and Dalen-Fuchs spots in another case.

Conclusion: In our study, neurological involvement was the predominant extraocular manifestation of VKH. Panuveitis and serous retinal detachment were the main ocular manifestations. Early diagnosis and corticosteroid therapy combined with immunosuppressive treatment help minimize complications and visual sequelae.

MÉDECINE LÉGALE

CO-247: MEDICO-LEGAL PATTERNS OF WORKPLACE FATALITIES: A FIVE-YEAR AUTOPSY-BASED STUDY.

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Introduction: Workplace fatalities are commonly reported as traumatic occupational accidents; however, deaths occurring on workplace premises may also result from natural or intentional causes. Autopsy-based data from North Africa remain scarce. This study aimed to describe the medico-legal patterns of workplace deaths and to explore factors associated with the main categories.

Methods: We conducted a retrospective autopsy-based study of all deaths occurring on workplace premises within a regional forensic jurisdiction in North Africa between 2019 and 2023. Sociodemographic, occupational, clinical, and forensic variables were analyzed using Chi-square tests and unadjusted odds ratios (ORs) with 95% confidence intervals (CI).

Results: A total of 131 cases were identified (mean age 44.9 ± 14.9 years; 93% male). Accidental deaths accounted for 62.5%, natural deaths 29.7%, suicides 6.1%, and homicides 1.5%. Accidental deaths were more frequent among workers under 50 years, those employed in agriculture or construction sectors, and professional drivers. Natural deaths were significantly associated with medical history and smoking, while psychiatric history was associated with suicide. Social security coverage was associated with hospital transfer.

Conclusion: Workplace deaths extend beyond traumatic injuries, with nearly one-third attributable to natural cardiovascular causes. Distinct epidemiological patterns characterize each medico-legal category. Forensic autopsy remains essential for accurate medico-legal classification and the development of targeted prevention strategies.

CO-248: THE SUICIDAL PROFILE IN THE BIZERTE REGION: A FOUR-YEAR STUDY (2019–2022)

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Introduction: Suicide is a major public health and forensic issue, with substantial consequences for individuals, families, and communities. Its occurrence is influenced by multiple interacting factors, including sociodemographic characteristics, psychiatric disorders, socioeconomic conditions, and access to lethal means. In Tunisia, suicide has become an increasingly important public health concern. However, regional epidemiological and forensic data remain limited. The governorate of Bizerte, characterized by both urban and rural areas and by diverse socioeconomic conditions, provides a relevant setting for studying suicidal behavior.

Methods: We conducted a retrospective, observational, descriptive study of all suicide cases occurring in the governorate of Bizerte between January 1, 2019, and December 31, 2022. Cases were identified from medico-legal records and autopsy reports from the Department of Forensic Medicine of Habib Bougatfa Hospital in Bizerte and the Department of Forensic Medicine of Charles Nicolle Hospital in Tunis. Sociodemographic characteristics, psychiatric history, previous suicide attempts, presumed motives, circumstances of death, location, season, survival time, suicide notes, and **Methods** used were collected and analyzed.

Results: A total of 97 suicide cases were identified during

the study period, with an average of approximately 24 cases per year and an estimated annual rate of 4.01 per 100,000 inhabitants. Suicide victims accounted for 10.6% of the 912 forensic autopsies performed during the study period. The mean age was 42 ± 17 years (range, 11–86 years), with the 40–60-year age group being the most represented (41.2%). There was a marked male predominance, with 75 men (77.3%) and 22 women (22.7%), corresponding to a male-to-female ratio of 3.4. Nearly half of the victims were single (49.5%). Among cases with documented occupational status, workers represented the largest group (34.5%), followed by unemployed individuals (31%).

Psychiatric history was documented in 43.3% of cases, with schizophrenia being the most frequently reported psychiatric disorder. Previous suicide attempts were identified in 20.6% of victims. The most frequently documented presumed motive was decompensation of a psychiatric disorder (24.74%), followed by family or intimate-partner conflicts (13.4%) and stressful circumstances (12.37%).

The number of suicides increased progressively from 20 cases in 2019 to 28 cases in 2022. Suicidal acts occurred predominantly during weekends and were most frequently committed in private homes (71.1%), followed by isolated outdoor locations (14.4%).

Hanging was the predominant suicide method, accounting for 67% of cases, followed by acute poisoning (14.4%), sharp-force injury.

Conclusion: This four-year forensic study provides a detailed profile of suicide in the governorate of Bizerte. The typical victim was a middle-aged man, often single, unemployed or working as a laborer, with a substantial proportion having a psychiatric history. Psychiatric decompensation was the most frequently identified precipitating factor, while hanging was the predominant method of suicide and the private home was the most common location. These findings highlight the importance of early identification and management of psychiatric disorders, prevention of recurrent suicidal behavior, improved access to mental-health services, and restriction of access to lethal means.

CO-249: MALE MINOR SEXUAL ASSAULT IN CAP BON, TUNISIA: A TWO-YEAR RETROSPECTIVE STUDY

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Introduction: Sexual assault in male minors remains an underreported forensic issue, often represented as a social taboo especially in the region of North Africa.

We aim to profile the socio-demographic, forensic, and behavioral characteristics of male minor victims of sexual assault in the Cap Bon region.

Methods: A 2-year retrospective study (2024–2025) conducted at the Forensic Medicine Department of Taher Maamouri Hospital in Nabeul. Out of 174 total sexual assault cases involving minors, 50 male victims were studied.

Results: Male victims constituted 28.7% (N=50) of the victims of sexual assaults among minors. Mean victim age was 12.7 ± 3.9 years (range: 2–17; median: 14). Most resided in urban areas (58%, N=29), belonged to low (52%, N=26) or middle (44%, N=22) socioeconomic status, and lived with both parents (62%, N=31). Primary education was reported in 50% (N=25). Aggressors were mostly single perpetrators (92%, N=46), mean age 28 years (range: 11–75), with high rates of substance use (smoking 65.2%, alcohol 55.7%, drugs 49.4%). Offenses were

most frequent in public places (N=14) or the assailant's home (N=7). Known perpetrators included fathers (N=10), cousins (N=9), uncles (N=5), and friends (N=6); 14 cases involved strangers. Most victims disclosed to parents (80%, N=40). Sexual touching was the primary assault type (71.3%), while acute physical lesions confirming recent anal penetration were documented in 2 victims.

Conclusion: Male pediatric sexual assault in Cap Bon mainly affects urban, low-to-middle-income adolescents, predominantly committed by familiar male adults or relatives. Therefore, attentive supervision of minors and targeted prevention programs are essential.

MÉDECINE PHYSIQUE RÉÉDUCATION ET RÉADAPTATION FONCTIONNELLE

CO-250: COPING STRATEGIES AMONG CAREGIVERS OF HOSPITALIZED PATIENTS WITH SEVERE MOTOR DISABILITY

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Introduction: Caring for a person with severe motor disability requires prolonged adaptation to caregiving demands, patient handling, and daily organization. The coping strategies used may influence how caregivers experience this situation.

Methods: A descriptive cross-sectional study was conducted among primary caregivers of patients with severe motor disability hospitalized in a physical and rehabilitation medicine department and regularly involved in their home care. Coping strategies were assessed using the Brief COPE, which explores 14 dimensions, each scored from 2 to 8.

Results: Twenty-one caregivers were included. The dimensions with the highest mean scores were active coping (7.7 ± 1.2), planning (7.5 ± 0.9), acceptance (7.2 ± 1.6), positive reframing (7.1 ± 1.2), and religion (6.8 ± 1.3). Use of instrumental support was moderate (5.5 ± 1.2), as was emotional expression (5.0 ± 1.9). The lowest scores were observed for behavioral disengagement (3.3 ± 1.6) and substance use (3.0 ± 1.0).

Conclusion: In this population, caregivers mainly reported using active coping strategies, including planning, acceptance, and positive reframing, with religion also playing an important role. Assessment of coping strategies may help better identify each caregiver's resources and needs and allow individualized information, education, and psychosocial support in rehabilitation medicine. Larger studies should further explore their associations with caregiving burden, anxiety, and depressive symptoms.

CO-251: ANXIETY AND DEPRESSIVE SYMPTOMS AMONG FAMILY CAREGIVERS OF PATIENTS WITH SEVERE MOTOR DISABILITY

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Introduction: Severe motor dependency may expose family caregivers to substantial psychological distress, particularly when they provide daily care and support to the patient.

Methods: A descriptive cross-sectional study was conducted among primary family caregivers of patients with severe motor

disability hospitalized in a physical and rehabilitation medicine department and regularly involved in their home care. Anxiety and depressive symptoms during the previous week were assessed using the Hospital Anxiety and Depression Scale (HADS). For each subscale, scores from 0 to 7 were considered normal, 8 to 10 borderline, and ≥ 11 suggestive of clinically significant symptoms.

Results: Twenty-one caregivers were included. Their mean age was 47.3 ± 11.7 years, and 76.2% were women. All provided daily care, with a mean caregiving time of 19.2 ± 7.3 hours per day. The mean HADS-Anxiety score was 9.7 ± 3.0 : five caregivers (23.8%) had a normal score, 12 (57.1%) a borderline score, and four (19.0%) a score ≥ 11 . The mean HADS-Depression score was 10.2 ± 4.0 : seven caregivers (33.3%) had a normal score, five (23.8%) a borderline score, and nine (42.9%) a score ≥ 11 .

Conclusion: Anxiety and depressive symptoms, as screened by the HADS, were common among family caregivers of highly dependent patients. Screening should be integrated into the overall rehabilitation assessment, alongside evaluation of caregiving burden, social difficulties, and respite needs. Appropriate information, psychological support, and specialist referral when scores are suggestive should be considered, while recognizing that questionnaire-based screening does not constitute a psychiatric diagnosis.

CO-252: AUTONOMOUS MOTIVATION, PHYSICAL ACTIVITY, AND INSOMNIA SYMPTOMS AMONG HEALTHCARE PROFESSIONALS

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Introduction: Healthcare professionals are exposed to occupational constraints that may promote insufficient physical activity, sedentary behavior, and sleep disturbances. Autonomous motivation toward physical activity may support regular and sustained engagement.

Aim: To explore the associations between motivation toward physical activity, physical activity level, sedentary behavior, and insomnia symptoms among healthcare professionals.

Methods: A cross-sectional observational study was conducted among adult healthcare professionals working in the Physical and Rehabilitation Medicine Department of Jbel Oust Health Complex. Participants completed validated questionnaires assessing motivation toward physical activity, physical activity level (RAPA), weekly moderate-to-vigorous physical activity (EVS), daily sedentary time (IPAQ), and insomnia symptoms (ISI). An ISI score ≥ 8 indicated clinically significant symptoms and ≥ 15 moderate-to-severe insomnia.

Results: Twenty-five healthcare professionals were included, with a mean age of 39.4 ± 8.7 years; 68% were women. According to the RAPA, 72% did not meet physical activity recommendations, including 32% who were sedentary. According to the EVS, 64% performed less than 150 minutes of moderate-to-vigorous physical activity per week. An ISI score ≥ 8 was observed in 64% of participants, including 16% with an ISI score ≥ 15 .

The mean autonomous motivation score was $5.2 \pm 0.9/7$, while amotivation was low at $2.2 \pm 0.9/7$. Higher autonomous motivation was associated with a greater weekly physical activity volume (216 ± 134 vs 113 ± 91 min/week) and a lower ISI score (8.3 ± 4.2 vs 13.2 ± 5.5). A moderate inverse correlation was observed between autonomous motivation and ISI score (r

$= -0.46$).

Conclusion: Higher autonomous motivation was associated with greater physical activity levels and less severe insomnia symptoms. These exploratory findings highlight the value of integrating motivational determinants and sleep into physical activity promotion strategies for healthcare professionals.

CO-253: CLINICAL PROFILE OF NEUROPATHIC PAIN AFTER TRAUMATIC SPINAL CORD INJURY

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Introduction: Neuropathic pain after spinal cord injury has a heterogeneous clinical presentation. Careful phenotyping may facilitate its recognition.

Aim: To describe the main clinical features of neuropathic pain in patients with chronic traumatic spinal cord injury.

Methods: This cross-sectional descriptive study included 22 patients. Pain intensity, location, timing, frequency, onset delay, and major neuropathic descriptors were recorded.

Results: Mean age was 46.3 ± 18.0 years and 18 patients (81.8%) were men. Mean pain intensity was $6.6 \pm 1.7/10$. Pain was daily in 19 patients (86.4%) and occurred both during the day and at night in 16 (72.7%). Pain was exclusively below the neurological level in 14 patients (63.6%) and both at-level and below-level in 8 (36.4%). Pain onset occurred at least three months after injury in 13 patients (59.1%). The most frequent symptoms were tingling (100%), burning (95.5%), electric shocks (90.9%), and tactile hypoesthesia (77.3%).

Conclusion: Neuropathic pain was persistent and of substantial intensity. Tingling, burning, and electric shock-like sensations were the predominant clinical features.

CO-254: BOWEL MANAGEMENT PRACTICES IN PATIENTS WITH TRAUMATIC SPINAL CORD INJURY

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Introduction: Neurogenic bowel dysfunction after spinal cord injury requires an individualized bowel program combining dietary measures, evacuation techniques, and appropriate treatments.

Aim: To describe bowel management practices in patients with chronic traumatic spinal cord injury.

Methods: This cross-sectional descriptive study included 22 patients. Dietary and fluid measures, scheduled bowel emptying, positioning, manual evacuation techniques, and bowel treatments were recorded.

Results: Dietary and fluid measures were reported by 21 patients (95.5%). Scheduled bowel emptying at a fixed time was used by only 2 patients (9.1%), and appropriate positioning by 3 (13.6%). The Valsalva maneuver was used by 13 patients (59.1%), digital evacuation by 12 (54.5%), and digital stimulation by 7 (31.8%). Osmotic laxatives were used by 9 of the 21 patients with available data (42.9%). Glycerin suppositories and micro-enemas were each used by 9 patients (40.9%).

Conclusion: Evacuation maneuvers and rectal treatments were frequently used, whereas scheduled bowel emptying and appropriate positioning were uncommon. These findings highlight the need to strengthen education on individualized bowel programs.

CO-255: LOW BACK PAIN AND SCIATICA: COMPARISON OF CLINICAL PROFILES

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Introduction: Sciatica refers to low back pain associated with sciatic irradiation and may present a distinct clinical profile compared to isolated low back pain.

Objective:

To compare the clinical characteristics of patients with isolated chronic low back pain and those with chronic sciatica.

Methods: A comparative observational study was conducted over six months in the Physical Medicine and Rehabilitation (PMR) departments of the University Hospitals of Sousse and Kairouan. Patients with common chronic low back pain or sciatica lasting more than three months were included. Sociodemographic and clinical data were collected. Pain intensity was assessed using the Visual Analog Scale (VAS) at rest and during activity. Neuropathic pain was screened using the Douleur Neuropathique questionnaire (DN4), and disease duration was recorded.

Results: A total of 210 patients were studied, including 109 (51.9%) with sciatica and 101 (48.1%) with isolated low back pain. Patients with sciatica were older (50.6 ± 14.6 vs. 40.1 ± 14.8 years; $p < 0.001$) and had a longer disease duration (68.1 ± 79.6 vs. 41.9 ± 69.4 months; $p < 0.001$). BMI was comparable between groups (26.7 ± 4.6 vs. 26.3 ± 4.3 kg/m²; $p = 0.383$). Pain intensity was higher in sciatica both at rest (4.2 ± 2.0 vs. 2.8 ± 1.8 ; $p < 0.001$) and during activity (7.0 ± 1.4 vs. 6.2 ± 1.3 ; $p < 0.001$). The DN4 score was significantly higher in the sciatica group (3.1 ± 1.6 vs. 0.3 ± 1.1 ; $p < 0.001$).

Conclusion: Sciatica was associated with a more severe clinical profile, characterized by older age, longer disease duration, greater pain intensity, and a more pronounced neuropathic component, underscoring the need for differentiated clinical evaluation according to presentation.

CO-256: NEUROPATHIC COMPONENT AND CLINICAL CHARACTERISTICS IN CHRONIC LOW BACK PAIN

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Introduction: Chronic low back pain may include a neuropathic component, potentially altering its clinical presentation and management.

Objective: To assess the prevalence of neuropathic pain and

identify its main clinical characteristics in patients with chronic low back pain.

Methods: A descriptive observational study was conducted over six months in the Physical Medicine and Rehabilitation (PMR) departments of the University Hospitals of Sousse and Kairouan. Patients with chronic low back pain or sciatica who agreed to participate were included. Sociodemographic and clinical data were collected. Pain intensity was assessed using the Visual Analog Scale (VAS) at rest and during activity. Neuropathic pain was screened using the Douleur Neuropathique 4 questionnaire (DN4), with a score ≥ 4 considered indicative of a neuropathic component.

Results: A total of 210 patients were included (mean age 45.6 ± 15.6 years; mean BMI 26.5 ± 4.5 kg/m²). Sciatica accounted for 51.9% of cases. The median duration of symptoms was 36 months [12–60]. The mean DN4 score was 1.8 ± 2.0 , and a neuropathic component (DN4 ≥ 4) was identified in 21.9% of patients. These patients were older (53.9 ± 15.2 vs. 43.3 ± 15.4 years; $p < 0.001$), reported more intense pain at rest (4.9 ± 1.7 vs. 3.1 ± 1.9 ; $p < 0.001$) and during activity (7.5 ± 1.1 vs. 6.4 ± 1.4 ; $p < 0.001$), and had a longer disease duration (70.3 ± 80.3 vs. 51.3 ± 73.9 months; $p = 0.021$).

Conclusion: The presence of a neuropathic component was associated with older age, greater pain intensity, and longer disease duration, highlighting the importance of systematic screening in patients with chronic low back pain.

MÉDECINE PRÉVENTIVE ET COMMUNAUTAIRE

CO-257: CONFORMITY OF STERILIZATION PRACTICES IN SAHLOUL UNIVERSITY HOSPITAL

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Introduction: Reprocessing reusable medical devices is a key component of healthcare-associated infections prevention, particularly for preventing surgical site infections. This study aimed to assess compliance with sterilization practices for heat-resistant devices in the central sterilization unit (CSU) of Sahloul University Hospital, Sousse, Tunisia.

Methods: A professional practice assessment audit was conducted in the CSU between December 2025 and February 2026. Practices were assessed by two trained external investigators using an observation grid based on the latest recommendations of best practices. The grid covered seven dimensions and included 52 items: reception, manual washing, drying and packaging, autoclave loading, sterilization, unloading and traceability. Each item was classified as compliant or non-compliant. The score for each dimension was calculated as the proportion of compliant items among the total number of items assessed.

Results: Overall, 81 observations were conducted for each sterilization step, yielding 567 audits overall. Compliance rate

ranged from 75% to 100%. Full compliance was observed for sterilization and traceability (100%), followed by unloading (98.75%), drying and packaging (96.51%), autoclave loading (92.45%) and manual washing (91.97%).

Reception of medical devices had the lowest compliance rate (75%). The main areas of non-compliance were the lack of traceability of the pre-disinfection step in the operation room and inadequate use of personal protective equipment.

Conclusion: Sterilization practices were highly compliant, with full compliance achieved in the sterilization step and traceability. Improvement efforts should focus on strengthening traceability at reception and ensuring appropriate use of protective equipment, supported by training and regular audits.

CO-258: SATISFACTION OF OPERATING ROOM STAFF WITH MEDICAL DEVICE REPROCESSING AT SAHLOUL UNIVERSITY HOSPITAL

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Introduction: The quality of reusable medical device reprocessing directly affects the daily work of operating room (OR) staff and patient safety. This study aimed to assess the OR staff satisfaction with medical device reprocessing at a university hospital in Tunisia.

Methods: A cross-sectional study was conducted in six ORs at Sahloul University Hospital between January and February 2026. All surgeons, OR technicians and nurses were invited to participate (N = 141). Satisfaction was assessed using a self-administered questionnaire covering three main operational dimensions: product quality, timeliness and responsiveness, and quality management and communication. Responses were rated on a four-point Likert scale ranging from 1 (very dissatisfied) to 4 (very satisfied). For each item, the proportions of respondents who were satisfied or very satisfied were calculated.

Results: A total of 120 questionnaires were correctly completed, corresponding to a response rate of 85.1%. The highest expressed approval was reported for product quality (68.1%), particularly the inclusion of the sterilization date and OR name (80.9%). Satisfaction was lower for timeliness and responsiveness (56.2%) and quality management and communication (56.9%). Within these dimensions, responsiveness in emergency situations (46.7%) and feedback following adverse events or complaints (50.0%) were identified as the main area of dissatisfaction.

Conclusion: Overall satisfaction with the medical device reprocessing service was moderate, with emergency responsiveness and feedback following incidents identified as the main areas for improvement. Strengthening communication and coordination between the OR and the Central Sterilization Unit should be prioritized to support continuous quality improvement.

CO-259: LOW WILLINGNESS OF PEDIATRICIANS TO

RECOMMEND THE CHILDHOOD COVID-19 VACCINATION, TUNISIA, 2023

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Introduction: Parents' skepticism toward childhood COVID-19 vaccination remains a major barrier to controlling the spread of the virus. Pediatricians' recommendations play a key role in caregivers' acceptance of vaccination. This study aimed to estimate the proportion of Tunisian pediatricians willing to recommend COVID-19 vaccination for children and to identify associated factors.

Methods: A national cross-sectional study was conducted among Tunisian pediatricians working in both private and public sectors between July and October 2023. We used simple random sampling to select pediatricians from the National Chamber of Physicians list. Consenting pediatricians were interviewed in person regarding their attitudes and practices toward childhood COVID-19 vaccination. Prevalence with 95% confidence intervals (95%CI) and adjusted odds ratios (aOR) -using multivariable logistic regression- were calculated.

Results: Of 330 contacted pediatricians, 192(58%) responded (median age: 50 [interquartile range 41-61] years; 43% were male). Among respondents, 41%;95%CI:[34-48] declared their willingness to recommend COVID-19 vaccination for children, of whom 68% [95%CI:58-78] would recommend it only for children with comorbidities. The odds of pediatricians willing to recommend the childhood COVID-19 vaccination was higher among those who believed that this vaccine reduces school absenteeism (aOR=2.3[1.1-5.1]) and among those with high confidence in the Ministry of Health recommendations regarding COVID-19 vaccination (aOR=6.1[2.2-16.9]).

Conclusion: Most pediatricians were unwilling to recommend COVID-19 vaccination for children. Limited confidence in the vaccine and in official recommendations appears to influence this reluctance. Strengthening access to up-to-date, evidence-based information and improving dissemination of national guidelines through tailored communication channels are essential to support pediatricians in promoting vaccination.

CO-260: COVID-19 VACCINATION RECOMMENDATIONS FOR CHILDREN: DRIVERS AND BARRIERS AMONG PEDIATRICIANS, TUNISIA

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Introduction: Pediatric COVID-19 vaccination has raised concerns among parents, particularly due to the perceived low severity of the disease in children and uncertainties about long-term vaccine safety. Pediatricians' recommendations play a key role in parental acceptance. In Tunisia, vaccination coverage remains low despite authorization, suggesting hesitancy

among healthcare professionals. This study aimed to identify the main motivations and barriers influencing pediatricians' recommendations for COVID-19 vaccination in children.

Methods: A national descriptive cross-sectional study was conducted between July and October 2023 among pediatricians in the public and private sectors in Tunisia. Participants were selected by simple random sampling from the national physician directory. Data were collected through face-to-face interviews using a standardized questionnaire. **Results** are presented as simple frequencies and percentages with their 95% confidence intervals.

Results: A total of 192 pediatricians responded (a mean age = 50.9 ± 12.9 years ; female majority (57.3%)). Among participants, 40.6%; [33.7–47.6] reported recommending COVID-19 vaccination in children under 16, of whom two-thirds only for those with chronic diseases (65.4%; [54.3–75.0]). The main reasons for not recommending were fear of vaccine adverse effects (38.2%; [30.8–45.8]) and the absence of severe COVID-19 cases in children (36.4%; [29.0–43.8]). Motivations for recommending included protection against severe disease (40.5%; [32.6–48.5]) and the possibility of a worsening epidemiological situation (28.4%; [21.1–35.6]). Notably, 21.3%; [15.4–27.8] stated that no argument would lead them to recommend COVID-19 vaccination in children.

Conclusion: Pediatricians' recommendations for COVID-19 vaccination in children remain limited and conditional. Addressing safety concerns, improving access to evidence, and strengthening the communication of national guidelines are essential to support vaccine promotion.

CO-261: ANTIBIOTIC SELF-MEDICATION IN TUNISIA: KNOWLEDGE, ATTITUDES AND PRACTICES AMONG PRIMARY CARE PATIENTS

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Introduction: Antibiotic self-medication is a widespread practice in many developing countries, contributing significantly to the emergence of antimicrobial resistance on a global scale. This phenomenon represents a growing public health concern, fueled by easy access to these medications without a prescription.

The aim of this study was to describe the knowledge, attitudes and practices of primary care patients in Tunis regarding antibiotic self-medication, and to identify associated factors.

Methods: We conducted a descriptive cross-sectional study between March and June 2025 among patients at the Kram Ouest primary healthcare center in Tunis. Data were collected using a standardized questionnaire. Factors associated with self-medication were identified through multivariate analysis using binary logistic regression.

Results: A total of 310 participants was included (mean age: 50.3 ± 14.5 years; male-to-female ratio: 0.3). More than one fifth (22.3%; 95% CI: [17.6–26.9]) reported taking antibiotics without a medical prescription at least once in the past 12 months. In multivariate analysis, the factors independently associated with this practice were: younger age (≤40 years vs >60 years, aOR = 3.9; 95% CI: [1.6–9.9]), agreement with sharing antibiotics among family or friends presenting the same symptoms (aOR

= 2.3; 95% CI: [1.1–4.9]), storing leftover antibiotics at home for future use (aOR = 4.8; 95% CI: [2.6–9.1]), and purchasing antibiotics without a prescription before traveling abroad (aOR = 5.3; 95% CI: [2.4–11.8]).

Conclusion: This study reveals that antibiotic self-medication remains prevalent among primary healthcare patients in Tunis, despite existing regulations and awareness campaigns. From a One Health perspective integrating human, animal and environmental dimensions, strengthening targeted educational interventions combined with increased control over non-prescription sales is essential to curb this practice and contain antimicrobial resistance.

CO-262: BREAST CANCER KNOWLEDGE AND ATTITUDES TOWARD SCREENING AMONG TUNISIAN WOMEN: A CROSS-SECTIONAL STUDY

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Introduction: Breast cancer represents a major public health concern and is the most common cancer among women in Tunisia. Knowledge about the disease may influence women's attitudes toward breast cancer and its screening, which constitutes a cornerstone of effective management. This study aimed to assess the association between the level of breast cancer knowledge and women's attitudes toward the disease and its screening.

Methods: We conducted a cross-sectional study during pink october 2025, among adult women attending primary healthcare facilities and public screening settings (health centers, screening campaigns, etc.). Data were collected using a self-administered electronic questionnaire in Tunisian Arabic. The questionnaire included sociodemographic characteristics, breast cancer knowledge, attitudes and perceptions, and screening practices.

Results: The study population comprised 240 women. The most represented age group was 40–49 years (30%), and 54.6% of participants had a higher education level. Our analyses revealed several statistically significant associations between knowledge level and attitudes, particularly regarding the cost of screening examinations ($p = 0.007$), fear of the consequences of an abnormal finding ($p < 0.001$), and perceived accessibility of screening services ($p < 0.001$). Specifically, an unfavorable attitude regarding fear of the consequences of an abnormal finding was more prevalent than a favorable attitude among women with low levels of breast cancer knowledge (79.5% vs. 41.8%). Similarly, regarding perceived accessibility of screening services, women with low knowledge levels were more likely to report an unfavorable attitude (75.8%) than a favorable attitude (29.8%).

Conclusion: Our findings suggest that low levels of breast cancer knowledge may negatively influence women's attitudes toward breast cancer and its screening. These **Results** highlight the importance of strengthening breast cancer education and awareness interventions to improve women's perceptions and attitudes toward screening.

CO-263: RISKY PRACTICES RELATED TO ANTIBIOTIC USE IN PRIMARY HEALTH CARE, TUNIS, TUNISIA

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Introduction: Antibiotic self-medication (ASM) is common and contributes to antibiotic resistance. Despite regulations in Tunisia, inappropriate antibiotic use persists, particularly in primary health care.

This study aimed to describe risky antibiotic use practices among primary health care patients in Tunis.

Methods: A descriptive cross-sectional study was conducted between March and June 2025 among 310 adult patients consulting at the Kram Ouest primary health care center. Data were collected using a standardized questionnaire exploring antibiotic use practices over the past 12 months. Descriptive data analysis was performed using Jamovi software. Anonymity and data confidentiality were maintained throughout the analysis.

Results: A total of 310 patients participated. The majority were women (76.8%), with a mean age of 50.3 ± 14.5 years. The prevalence of ASM over the past 12 months was 22.3% (95% CI: [17.6–26.9]). Among the risky practices observed, 30.3% (95% CI: [25.2–35.4]) reported storing leftover antibiotics at home for future use, and 14.2% (95% CI: [10.3–18.1]) systematically stopped their antibiotic treatment without medical advice when no improvement was felt. Among the 184 participants who had previously traveled, 20.7% (95% CI: [14.8–26.5]) reported purchasing antibiotics without a prescription before traveling. Antibiotics were primarily obtained at pharmacies without a prescription (89.9%; 95% CI: [82.7–97.0]), and amoxicillin was the most frequently used antibiotic (66.0%; 95% CI: [53.3–78.8]).

Conclusion: ASM and risky antibiotic use practices remain common among primary health care patients in Tunis, despite existing regulations. The frequent storage of leftover antibiotics, non-prescription access through pharmacies, and pre-travel stockpiling point to persistent gaps in antibiotic use practices. Strengthening patient education and enforcing dispensing regulations are essential to promote rational antibiotic use and limit antibiotic resistance.

CO-264: KNOWLEDGE OF PREVENTIVE MEDICINE RECOMMENDATIONS AMONG FAMILY MEDICINE RESIDENTS IN TUNISIA

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Introduction: Preventive medicine is a core component of family medicine, and adequate knowledge of preventive-care recommendations is essential for the appropriate delivery of screening and preventive services. This study aimed to assess

knowledge of selected preventive medicine recommendations among family medicine residents in Tunisia.

Methods: A cross-sectional study was conducted among family medicine residents in Tunisia between April and June 2026. A validated tool, the Preventive Medicine Attitudes and Activities Questionnaire (PMAAQ), was adapted to the Tunisian context and administered online. Knowledge items assessed seven selected preventive-care recommendations. The items covered cervical cancer screening, influenza vaccination, clinical breast examination, serum cholesterol screening, and colorectal cancer screening. Descriptive statistics were used to estimate the proportion of residents answering each item correctly, along with 95% confidence intervals.

Results: A total of 173 family medicine residents participated. The mean age was 28.8 ± 2.1 years, 72.1% were women, and 45.7% were third-year residents. The proportion of correct responses varied substantially across the seven knowledge items. One-third of participants (33.5% [26.5–41.1]) correctly identified the recommendation for Pap smear screening. Most participants correctly identified the influenza vaccination recommendations (75.7% [68.6–81.9] for patients with chronic disease and 80.3% [73.6–86.0] for adults aged ≥ 65 years). Less than half of the residents (44.5% [37.0–52.2]) correctly identified the recommendation for clinical breast examination in women aged ≥ 30 years. Knowledge of serum cholesterol screening was particularly low: 8.7% [4.9–13.9] for men aged ≥ 40 years and 6.4% [3.2–11.1] for women aged ≥ 50 years. Only 23.1% [17.1–30.1] correctly identified the fecal occult blood testing recommendation among adults aged 50–74 years.

Conclusion: Knowledge of preventive medicine recommendations among family medicine residents was heterogeneous, with important gaps in several screening domains. The greatest deficiencies concerned serum cholesterol screening, fecal occult blood testing, and Pap smear screening. These findings highlight specific areas that should be reinforced within family medicine residency training to strengthen residents' preparedness to deliver evidence-based preventive care.

CO-265: MEDICATION ADHERENCE, SELF-CARE PRACTICES, AND QUALITY OF LIFE AMONG PATIENTS WITH TYPE 2 DIABETES

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Introduction: The prevalence of type 2 diabetes mellitus (T2DM) is rising globally, making it a significant public health concern. Achieving appropriate glycemic control, which is heavily impacted by medication adherence and self-care practices, is crucial for the effective management of T2DM.

Aim: To identify factors associated with adherence to anti-diabetic therapy and to examine the relationships between medication adherence, self-care practices, glycemic control, and quality of life among Tunisian patients with T2DM.

Methods: A cross-sectional study was conducted among patients with T2DM attending an outpatient clinic in Sfax, Tunisia. Validated questionnaires measuring medication adherence (The 6-item Girerd questionnaire), diabetic self-care practices (the Summary of Diabetes Self-Care Activities-Arabic),

and quality of life (The Arabic version of the Diabetes Quality of Life) were used.

Results: Among the 320 participants, the mean total medication adherence score was $4.05 \pm 1.35/6$, with 14.4% ($n=46$) demonstrating a good level of medication adherence (score=6/6). The mean total score for self-care behaviors was $3.37 \pm 1.39/7$, while the mean total quality-of-life score was $3.05 \pm 0.32/7$.

Low medication adherence was significantly associated with poor glycemic control ($p=0.043$), low socio-economic status ($p<0.001$), higher total pill burden ($p=0.028$), a greater number of anti-diabetic medications ($p<0.001$), treatment-related side effects ($p=0.014$), reduced quality of life ($p<0.001$), and insufficient self-care practices ($p=0.001$).

Conclusion: Patients with T2DM continue to have suboptimal medication adherence and self-care practices, which are strongly linked to poor glycemic control and a lower quality of life. These findings emphasize the need of addressing patient-related factors in order to improve diabetes care and improve clinical and psychosocial outcomes.

CO-266: WORKPLACE DISSATISFACTION, PSYCHOLOGICAL DISTRESS, AND MIGRATION INTENTIONS AMONG TUNISIAN RESIDENT

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Introduction: Medical brain drain is a major challenge for healthcare systems in developing countries and may be driven by unfavorable working conditions and poor psychological well-being among healthcare professionals. Identifying modifiable professional and psychosocial factors associated with migration intentions is essential for developing effective retention strategies. This study aimed to assess the association between psychological well-being, life satisfaction, professional satisfaction, and migration intentions among Tunisian medical residents.

Methods: A cross-sectional survey was conducted among medical residents across various specialties at the Faculty of Medicine of Sousse via a Google Forms questionnaire, with multiple reminders to maximize response rates. The questionnaire covered sociodemographic data, migration intentions, and validated push-factor scales: WHO-5 Well-Being Index, Satisfaction With Life Scale (SWLS), and an 11-item Professional Satisfaction score. Statistical analysis was performed using SPSS, with bivariate comparisons conducted using Pearson's Chi-square test ($p < 0.05$).

Results: Among 101 residents (mean age 28.76 ± 3.20 years, 86.1% female), 56.4% intended to migrate post-residency. Overall, 58.4% experienced impaired well-being (WHO-5 ≤ 50), 63.4% reported severe professional dissatisfaction, and 64.4% reported life dissatisfaction (SWLS). Migration intention was significantly higher among residents with psychological distress (WHO-5 ≤ 50) with (66.1% vs 42.9%, $p=0.020$). Severe professional dissatisfaction was strongly associated with migration intent (70.3% vs 32.4% $p<0.001$). Life dissatisfaction further increased migration desire (64.6% vs 41.7%, $p=0.026$).

Conclusion: Professional dissatisfaction, impaired psychological well-being, and life dissatisfaction were significantly associated with migration intentions among Tunisian resident physicians.

Mitigation strategies should address working conditions, career opportunities, institutional support, and mental health to retain medical expertise.

CO-267: BREAST CANCER RISK ESTIMATION USING THE GAIL MODEL IN MONASTIR, TUNISIA

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Introduction: Breast cancer (BC) is the most common cancer among women worldwide and a major public health concern, particularly in Tunisia where it represents the leading female cancer. Risk-based screening strategies may help identify women at increased risk and optimize prevention efforts. We aimed to estimate BC risk distribution among women in Monastir, Tunisia, using the Gail model and identify factors associated with risk variation.

Methods: A cross-sectional study was conducted in Monastir in October 2024 and 2025. Stratified random sampling method ensured representativeness across age groups, reflecting the local female population. Data was collected through face-to-face interviews. BC risk was estimated using the Gail model, generating 5-year and lifetime risk scores.

Results: The study included 360 women aged 35–74 years. Mean 5-year and lifetime BC risks were 1.24 ± 0.82 and 9.72 ± 4.08 , respectively. Most participants were classified as low risk (82.2% for 5-year risk and 97.8% for lifetime risk). In multivariable analysis, 5-year BC risk was mainly driven by family history ($\beta=0.588$; $p<0.001$), age ($\beta=0.559$; $p<0.001$), age at first birth ($\beta=0.214$; $p<0.001$), and breast biopsy history ($\beta = 0.190$; $p<0.001$). Breastfeeding was protective ($\beta=-0.103$; $p=0.017$). Lifetime risk was driven by family history ($\beta=0.714$; $p<0.001$), age ($\beta=-0.332$; $p<0.001$), age at first birth ($\beta=0.305$; $p<0.001$), breast biopsy history ($\beta=0.130$; $p<0.001$), age at menarche ($\beta=-0.088$; $p=0.001$), being employed ($\beta=0.075$; $p=0.016$), and parity ($\beta=-0.212$; $p<0.001$).

Conclusion: A substantial proportion of women had elevated BC risk. Classical Gail model factors were strongly associated with risk, and reproductive factors such as breastfeeding and parity also influenced risk variation. These findings support implementing risk-based prevention and adapting prediction tools to Tunisia.

CO-268: COVID-19 VACCINATION: A PROTECTIVE FACTOR AGAINST LONG-TERM MEMORY DISORDERS

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Introduction: Cognitive sequelae of COVID-19, particularly memory disorders, represent a major public health concern. The aim of this study was to evaluate the effect of complete vaccination against persistent memory impairment at one-year post-infection.

Methods: A retrospective cohort study was conducted at the preventive medicine department of the university hospital of Monastir between September 2021 and January 2022. The study population included 242 subjects: 121 cases with a positive PCR test and 121 controls matched for age and sex with no history

of COVID-19. Memory impairment was assessed one year after acute infection using the MacNair Cognitive Difficulties Scale. A score >15 defining significant memory complaints. Multivariate analysis using Poisson regression was performed to identify predictive factors for memory disorders, adjusting for comorbidities, age, sex, and pre-infection vaccination status. **Results:** Exposure to COVID-19 was a significant risk factor for memory disorders (exp β =1.25; 95%CI [1.10-1.42]). Multivariate analysis demonstrated that complete vaccination (≥ 2 doses) prior to infection was a robust protective factor against memory impairment at one year (exp β =0.84; 95%CI [0.74-0.96]; $p < 0.05$). Other predictive factors identified included age (exp β =1.006; 95%CI [1.001-1.01]), male gender (exp β =0.65; 95%CI [0.57-0.73]), diabetes (exp β =1.67; 95%CI [1.44-1.95]), history of anxiety and depression (exp β =1.71; 95%CI [1.35-2.17]), and obesity (exp β =1.25; 95%CI [1.10-1.42]).

Conclusion: Complete COVID-19 vaccination significantly reduces the risk of long-term memory impairment at one-year post-infection, highlighting its protective role beyond acute disease. These findings support strengthening booster vaccine coverage and incorporating cognitive monitoring into routine post-COVID care, especially for high-risk groups.

CO-269: ADHERENCE TO THE MEDITERRANEAN DIET AND COLORECTAL CANCER RISK IN MONASTIR, TUNISIA

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Introduction: Colorectal cancer (CRC) represents a major public health problem in Tunisia, with increasing incidence. This study aimed to assess the association between adherence to the Mediterranean diet and colorectal cancer risk in the Monastir region, Tunisia.

Methods: This was a case-control study conducted between 2023 and 2025 in collaboration between the Departments of Preventive Medicine and Carcinology at the University Hospital of Monastir. Data were collected using a standardized questionnaire exploring sociodemographic characteristics, personal and family history, lifestyle habits, and dietary intake assessed by the Mediterranean Diet Score.

Results: The study included 164 cases and 164 controls. There were no significant differences between the two groups in terms of sex, marital status, or educational level. The median Mediterranean Diet Score was significantly lower among cases than controls, with a median of 3 (IQR: 2–4) among cases and 5 (IQR: 3–6) among controls ($p < 10^{-3}$). Multivariate analysis identified several factors independently associated with an increased risk of colorectal cancer, including older age, family history of CRC, low adherence to the Mediterranean diet, passive smoking, medium to high socioeconomic status, and consumption of heavily grilled red meat. In contrast, vigorous physical activity appeared to be a protective.

Conclusion: CRC in Tunisia **Results** from interactions between genetic, dietary, and behavioral factors. Promoting physical activity, adherence to a Mediterranean-type diet, and targeted screening could help reduce the incidence and mortality associated with this disease.

CO-270: BIBLIOMETRICS OF EDITORIAL AND METHODOLOGICAL TRENDS IN 2.16 MILLION MEDLINE

CARDIOVASCULAR STUDIES

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Introduction: The rapid growth of cardiovascular literature requires long-term mapping to determine how scientific priorities and research standards have evolved over time. Therefore, this study aimed to describe the international editorial and methodological evolution of publications on cardiovascular diseases over five decades from 1970 to 2019.

Methods: A descriptive bibliometric study was conducted using MEDLINE records indexed under the exploded Medical Subject Headings (MeSH) term "Cardiovascular Diseases". The database was searched in May 2024 and duplicate records were removed using PubMed identifiers. Publication types, research areas, languages, populations, and study designs were compared across two 25-year phases: Phase A (1970-1994) and Phase B (1995-2019).

Results: Overall, 2,163,207 publications were included: 641,344 in 1970-1994 and 1,521,863 in 1995-2019. Annual output increased from 17,710 publications in 1970 to 82,513 in 2019. Journal articles represented 90.1% of records. Reviews increased from 8.7% to 16%, meta-analyses from 0.1% to 1.3%, and English-language publications from 65.5% to 89.1%. Geriatrics and gerontology increased from 23.8% to 30.4%, while biochemistry and molecular biology increased from 24.1% to 30.1%. Publications involving older adults rose from 23.8% to 29.7%.

Conclusion: International cardiovascular research expanded markedly and shifted toward evidence synthesis, multidisciplinary investigation, and aging-related care. Future research should preserve methodological rigor while improving relevance and representation in high-burden, under-resourced settings.

CO-271: PATTERNS OF SOCIAL MEDIA USE, SLEEP HABITS, AND ACADEMIC PERFORMANCE AMONG TUNISIAN ADOLESCENTS

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Introduction: social media has become an integral part of adolescents' daily lives worldwide. Aim: To describe social

media use patterns, sleep habits, and academic performance among Tunisian adolescents.

Methods: A cross-sectional study was conducted in November 2023 in two middle schools in Tunis, Tunisia. Students enrolled in the 9th year of education, aged ≥ 15 years, present on the survey day, and consenting to participate were included. Data were collected using a self-administered Arabic questionnaire.

Results: A total of 202 students participated (mean age: 15.1 ± 0.6 years; range: 15–19 years), with a female predominance (male-to-female ratio=0.7). Overall, 96.5% reported using at least one social media platform. Facebook(81.7%), TikTok(79.7%), and Instagram(76.7%) were the most frequently used platforms. Most participants (86.1%) were active on at least two platforms, with no significant sex difference (86.7% among females vs. 85.4% among males; $p=0.7$). Nearly two-thirds(62.8%) spent more than two hours daily on social media, and 21.3% checked their accounts continuously throughout the day. More than half(54.6%) reported feeling anxious or frustrated when unable to access their accounts, while 37.5% acknowledged neglecting schoolwork or family activities because of social media use. Regarding sleep habits, 13.4% reported going to bed after midnight and 22.3% slept ≤ 6 hours per night. Average-to-poor academic performance was reported by 54.3% of students using three or more social media accounts versus 42.6% of others ($p=0.1$).

Conclusion: Social media use was highly prevalent, with extensive engagement across multiple platforms. Educational interventions with school-based initiatives promoting healthy and balanced digital habits should be encouraged.

CO-272: SEX DIFFERENCES IN PROPORTIONAL MORTALITY FROM CEREBROVASCULAR DISEASES IN TUNISIA,2015-2022

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Introduction: Cerebrovascular diseases (CeVDs) remain a major cause of death worldwide and contribute substantially to premature mortality and disability. Sex differences in CeVDs patterns have been reported. The study aimed to describe sex differences in CeVDs proportional mortality in Tunisia from 2015 to 2022.

Methods: Mortality data were obtained from the Tunisian Cause of Death Information System for 2015, 2017, 2020, 2021 and 2022. CeVDs were identified using the 10th International Classification of Diseases (codes I60–I69). Given the incompleteness of death registration, proportional mortality was used instead of cause-specific mortality rates, following World Health Organization recommendations. Sex-specific patterns in 2022 were described using the female-to-male proportional mortality ratio (F/M ratio), and temporal variations using age-standardized F/M ratios.

Results: In 2022, the CDIS recorded 55,217 death certificates (coverage :71.8% vs 38.5% in 2015). CeVDs accounted for 9.8% of male and 12.1% of female deaths (F/M ratio=1.23). Age-specific F/M ratios exceeded 1 in all groups except at 45–64 years (0.90), peaking at ≥ 75 years (1.24). Regional F/M ratios exceeded 1 in most regions, with the highest in Centre-West (1.45), North-East (1.39) and Centre-East (1.32), and the lowest

in the South-West (0.69). Age-standardized F/M ratios declined from 1.19 in 2015 and 1.18 in 2017 to 1.10 in 2020, then reaching 1.15 in both 2021 and 2022.

Conclusion: Sex differences were observed in CeVDs proportional mortality in Tunisia, with higher F/M ratios across most age groups and regions. Routine monitoring of sex- and region-specific proportional mortality could inform CeVD surveillance and public health planning.

CO-273: PROPORTIONAL MORTALITY FROM MALIGNANT NEOPLASMS IN TUNISIA: SEX- AND AGE-SPECIFIC PATTERNS, 2022

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Introduction: Malignant neoplasms are a leading cause of death worldwide and represent an important public health challenge despite advances in prevention and treatment. The study aimed to describe sex-specific patterns of proportional mortality from malignant neoplasms in Tunisia in 2022, overall and across age groups.

Methods: A descriptive study was based on 2022 data from the Tunisian Cause of Death Information System. Malignant neoplasms were defined according to the International Classification of Diseases, 10th Revision (C00–C97). Following World Health Organization recommendations, proportional mortality was used because death registration coverage was insufficient (71.8% in 2022) to estimate cause-specific mortality rates. Sex differences were described using the female-to-male proportional mortality ratio (F/M ratio), overall and by age group.

Results: The 2022 CDIS data included 55,217 death certificates. Malignant neoplasms accounted for 17.5% of deaths in women ($n=2,969$) and 22.4% in men ($n=4,930$), with an F/M ratio of 0.78. Age-specific F/M ratios were 1 in children aged 0–4 years (1.6% vs. 1.6%) and 0.94 at 5–14 years (16.8% vs. 17.9%), increased to 2.65 at 15–29 years (29.7% vs. 11.2%), 2.10 at 30–44 years (44.1% vs. 21.0%), then decreased to 1.17 at 45–64 years (39.2% vs. 33.5%), 0.78 at 65–74 years (23.0% vs. 29.3%), and 0.53 at ≥ 75 years (8.6% vs. 16.1%).

Conclusion: Although malignant neoplasms accounted for a higher proportion of deaths among men overall, F/M ratios varied markedly across age groups. These findings underline the importance of considering sex and age in prevention, screening, and control strategies in Tunisia.

CO-274: KNOWLEDGE, ATTITUDES AND PRACTICES REGARDING INFECTIOUS HEALTHCARE WASTE MANAGEMENT AMONG HEALTHCARE

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Introduction: Improper management of infectious healthcare waste (IHCW) may increase the risk of healthcare-associated infections and generate additional healthcare costs.

Aim: To assess healthcare workers' knowledge, attitudes, and practices regarding IHCW management.

Methods: A descriptive cross-sectional Knowledge, Attitudes, and Practices study was conducted over three months in 2026 at Charles Nicolle Hospital, Tunisia. Healthcare workers completed a self-administered questionnaire developed from the national manual for hazardous healthcare waste management. Knowledge level was classified as low(<50%), moderate(50–74%), or high(≥75%). A positive attitude was defined as a score>50%.

Results: A total of 207 healthcare workers participated, predominantly female(76.8%), with a mean age of 33.0±9.6 years. Nurses and physicians represented 45.4% and 30.9% of participants, respectively. Most respondents (71.5%) had never received training in IHCW management. Overall, 50.7% demonstrated moderate knowledge, 46.9% low knowledge, and only 2.4% high knowledge. One-third(33.0%) were unaware of the existence of a national regulatory framework for IHCW management, while 86.0% did not know that all healthcare workers share responsibility for waste management. In addition, 35.6% were unaware of the need for hand hygiene after handling healthcare waste. The mean attitude score was 37.2/50, and 54.0% of participants had a positive attitude. Regarding practices, 65.0% failed to correctly identify the standard steps of IHCW management. Blood exposure incidents were reported by 39.7% of participants during their careers; among them, 20.0% did not seek occupational health care.

Conclusion: Significant gaps in knowledge and practices regarding IHCW management were identified. Regular training and reinforcement of waste management procedures should be prioritized to improve compliance and occupational safety.

CO-275: ARTIFICIAL INTELLIGENCE LITERACY AND ITS ASSOCIATED FACTORS AMONG UNIVERSITY STUDENTS

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Introduction: Artificial Intelligence (AI) is increasingly transforming human life, particularly in education. Thus, understanding and effectively using AI known as AI literacy had become an essential skill particularly for university students (US). This study aimed to determine prevalence of good global AI literacy among US and its associated factors.

Methods: A validated questionnaire, Meta AI Literacy Scale (MAILS) was administered online to US from Sfax, Southern-Tunisia. It contained 6-point scale with 33 questions to measure three main dimensions of AI Literacy, AI Self-Efficacy and AI Self-Management. Then a global score was calculated to assess the global AI literacy. A score higher than 50/100 was used as a cut-off to define good AI Literacy, good AI Self-Efficacy, good AI Self-Management and global AI literacy.

Results: A total of 313 US were enrolled in this study. Median age of US was 22 IQR [19-25] years. The sex ratio was 0.65. In our study, 290 US (92,9 %) had a previous use of AI and 35 US (11.2%) had a training about AI. The main chatbot used was ChatGPT by 154 US (49.4%) and 88 US were using multiple AI-based platforms (28%). In addition, 240 US (76%) were

Integrating AI in their research.

The prevalence of good AI-literacy, Good AI-self-Efficacy and good AI-self-Management were 55,2%(N=172.7), 46.8%(N=146.4) and 77% (n=241,01) respectively. The prevalence of good Global-AI-literacy score was 65.4% (n=204.7). Factors associated with good global-AI literacy scores were anterior use of AI(OR=3.025;p=0.033), use of ChatGPT (OR=3,210; p=0.012), using multiple AI-based-platforms (OR=1.27;p=0.041) and integrating-AI in research (OR=1.031; p=0.039).

Conclusion: This study revealed a high prevalence of good AI literacy among US, mainly associated with prior experience using AI tools. These findings highlight the importance of exposure and hands-on practice in strengthening AI competencies.

CO-276: ACCESSIBILITY TO RECREATIONAL SPACES AND ENVIRONMENTAL SUPPORT FOR PHYSICAL ACTIVITY PRACTICE

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Introduction: Physical activity is essential for adolescent health, and environmental factors may influence its practice. This study aimed to assess adolescents' perceived accessibility to recreational spaces and environmental support for physical activity.

Methods: Descriptive cross-sectional study conducted in middle schools in Sousse. Data were collected via a standardized questionnaire administered from November 2024 to February 2025.

Results: 226 middle schoolers from Sousse (51.3% boys, mean age: 13.39 ± 0.86 years) participated in this study. The majority of adolescents (73.9%) considered recreational spaces accessible (40.3%, n = 91) or very accessible (33.6%, n = 76). A minority (17.7%, n = 40) found them accessible with difficulty, while 8.4% (n = 19) considered them inaccessible. No significant difference by sex was observed (p = 0.46). Regarding active commuting to school, 46.9% (n = 106) of adolescents did not practice any active transportation (walking or cycling) during the week. Only 25.2% (n = 57) met the active commuting criterion defined as at least 3 days/week, while 27.9% (n = 63) practiced 1-2 days per week. Over half (53.5%, n = 121) of adolescents practiced physical activity with a family member at least once per week. Concerning family transportation, 37.8% were transported daily by their parents to practice a sport, while 24.4% never received such support. The majority (55.8%) received regular verbal encouragement from their surroundings, and 59.7% were observed during their practice.

Conclusion: A supportive environment characterized by good accessibility to recreational spaces and active family support exists in this population. These elements constitute positive resources to exploit for promoting increased physical activity.

CO-277: PREVALENCE AND PREDICTIVE FACTORS OF HEALTHCARE-ASSOCIATED RESPIRATORY INFECTIONS

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Introduction: Healthcare-associated respiratory infections (HARIs) represent a frequent cause of morbidity in hospital settings and constitute a major challenge for the quality and safety of care. The objective of this study was to determine the prevalence and identify the risk factors of HARIs in patients hospitalized in a University Hospital Center (UHC).

Methods: This was a cross-sectional prevalence study conducted in 2025 in a UHC including all patients hospitalized for ≥ 48 hours. Respiratory infections were defined according to the criteria of the Centers for Disease Control and Prevention (CDC). Demographic and clinical data and potential risk factors were collected and analyzed.

Results: A total of 541 patients were included, of whom 49.2% were women, with a median age of 39 years (Interquartile Range [IQR] = [27–57]). Among them, 84 healthcare-associated infections were recorded, of which 25 cases (29.7%) were respiratory infections. Fever $\geq 38.5^\circ\text{C}$ was noted in 12 patients (75%). A total of 9 infections were documented. The most frequently isolated pathogens were multi-resistant *Klebsiella pneumoniae*, each representing 55.5% of the cases ($n = 5$). In the multivariate analysis, risk factors independently associated with HARIs were transfer from another hospital (Adjusted Odds Ratio [AOR] = 1.27; $p = 0.04$), hospitalization during the last 90 days (AOR = 1.845; $p < 0.001$), the presence of a central vascular catheter (AOR = 1.428; $p = 0.001$), the use of mechanical ventilation (AOR = 1.16; $p < 0.001$), neutropenia (AOR = 1.21; $p < 0.001$), and immunosuppression (AOR = 1.822; $p < 0.001$).

Conclusion: The high frequency of healthcare-associated respiratory infections highlights the need to strengthen staff training and awareness regarding prevention measures, in order to limit their occurrence and improve the clinical evolution of patients.

CO-278: LIFESTYLE HABITS AND SEDENTARY BEHAVIORS AMONG ADOLESCENTS: DIET, SLEEP, AND SCREEN TIME

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Introduction: This study aims to characterize dietary behavior, sleep duration, and screen exposure among adolescents in Sousse.

Methods: Descriptive cross-sectional study conducted in middle school in Sousse via a standardized questionnaire administered from November 2024 to February 2025.

Results: The study included 226 middle schoolers (51.3% boys, mean age: 13.39 ± 0.86 years). Regarding fruit and vegetable intake, 38.1% ($n = 86$) reported consuming ≥ 5 servings/day on ≥ 5 days/week, with no significant sex difference ($p = 0.29$). Regarding fast food consumption, 26.1% ($n = 59$) reported no consumption, 51.3% ($n = 116$) consumed it 1–2 times/week, and 22.6% ($n = 51$) ≥ 3 times/week. Regarding sleep duration,

54.3% ($n = 123$) reported ≥ 8 hours/night, with no significant sex difference (56.0% in boys vs. 52.7% in girls; $p = 0.61$), while 45.6% ($n = 103$) reported < 8 hours/night. Regarding recreational screen time, 51.8% ($n = 117$) met the WHO recommendation of < 2 h/day, while 48.2% exceeded this threshold, including 11.5% ($n = 26$) who reported > 4 h/day, with no significant sex difference ($p = 0.43$).

Regarding sedentary behavior, 67.7% ($n = 153$) spent > 8 h/day sitting or lying down, including 44.6% ($n = 101$) who reported > 10 h/day. This proportion tended to be higher in boys than girls (72.4% vs. 62.7%), although the difference was not statistically significant ($p = 0.12$).

Conclusion: Adolescents show a mixed lifestyle profile: adequate sleep for most, moderate fruit/vegetable intake, but high sedentary exposure. A comprehensive approach targeting sedentary time, diet, and sleep is recommended.

CO-279: KNOWLEDGE, RISK PERCEPTIONS, AND ACCEPTABILITY OF HPV VACCINATION AMONG HEALTH STUDENTS IN SOUSSE

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Introduction: Human Papillomavirus infection heavily contributes to cervical cancer in Tunisia. While vaccination provides primary prevention, successful implementation relies on future healthcare professionals' endorsement. However, empirical data regarding health students' knowledge, risk perception, and vaccine acceptability remain limited. This study aimed To assess knowledge, risk perceptions regarding HPV, and vaccine acceptability among health sciences students in Sousse .

Methods: A descriptive cross-sectional study was conducted using a self-administered questionnaire among medical and nursing students in Sousse. Data collection covered academic profiles, knowledge regarding pathological spectrum of HPV, vaccination recommendations, and personal vaccination intentions.

Results: The study included 164 students (mean age 20.8 ± 1.14 years) with a female predominance (68.9%). Regarding academic background, 30.5% were medical students, while 69.5% were from paramedical disciplines. Although most participants had heard of the vaccine (83.5%), knowledge gaps were evident: 47.6% identified cervical cancer as a complication of HPV infection, and a mere 4.9% were aware of the link between HPV and other cancers (anal, genital, and oropharyngeal). Furthermore, only 50.0% were aware of the vaccination recommendation for both sexes. However, a strong awareness of public health issues was noted: 86.0% acknowledged the severity of HPV-related diseases, and 51.2% perceived the vaccine's benefit-risk ratio as favorable. Despite this, only 44.5% of respondents expressed a clear intention to be vaccinated, while 39.6% remained undecided.

Conclusion: Our findings highlight a paradox between high cervical cancer severity awareness and personal vaccine hesitancy among health students. Enhanced academic training is essential to empower future healthcare professionals as confident HPV vaccination advocates.

CO-280: BRIDGING THE BREAST CANCER SCREENING GAP: THE ROLE OF PRIMARY CARE PHYSICIANS AND SOCIAL SUPPORT AMO

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Introduction: Breast cancer represents a major global and national public health concern. In Tunisia, breast cancer screening practices remain suboptimal despite their crucial role in early detection and cancer control. Primary care physicians and women's social networks may play an important role in promoting screening uptake. This study aimed to assess the role of physicians and social support in encouraging breast cancer screening among Tunisian women

Methods: A cross-sectional study was conducted during pink october 2025 in Tunisia, among adult women attending primary healthcare facilities and public health activities, including health centers and breast cancer screening campaigns. Data were collected using a self-administered electronic questionnaire in Tunisian Arabic. The questionnaire assessed sociodemographic characteristics, breast cancer knowledge, attitudes and perceptions, exposure to physician-provided information, social support, and breast cancer screening practices.

Results: A total of 240 women participated in the study. Women aged 40–49 years represented the largest age group (30%), while 54.6% had a higher education level. Nearly two-thirds of participants (60.8%) reported receiving information about breast cancer during a medical consultation; however, only 46.3% reported receiving a clear explanation of the benefits and limitations of breast cancer screening. Despite a high level of trust in physicians (92.9%), a substantial gap in structured and comprehensive information remained. Among married women, more than one-third (37.9%) reported that their husbands encouraged them to seek medical advice or undergo breast cancer screening. In addition, 43.8% of women reported receiving encouragement from family members or relatives to undergo screening.

Conclusion: Our findings highlight the important role of primary care physicians in promoting breast cancer screening and emphasize the potential contribution of women's social networks as a supportive lever for screening uptake. Strengthening physician-led, structured counseling and involving family and social support networks may contribute to improving breast cancer screening practices among Tunisian women.

CO-281: CARDIOVASCULAR RISK ASSESSMENT IN PRIMARY CARE: BARRIERS AND CLINICAL EFFECTS

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Introduction: Cardiovascular disease (CVD) is a leading cause of death globally. Primary prevention requires identification and management of people at elevated absolute risk. This narrative review aimed to summarise the clinical effects of CVD risk assessment in primary care and to identify barriers to its implementation.

Methods: We conducted a narrative review of systematic reviews, meta-analyses, implementation studies, and WHO reports identified in PubMed, Embase, and WHO sources through December 2025. We synthesised clinical and implementation outcomes.

Results: In the 2015 WHO Country Capacity Survey, only 21% of countries reported CVD risk stratification in more than half of primary-care facilities; 42% of low- and middle-income countries reported none in any primary-care facility. A Cochrane review of 41 trials (194,035 participants) found small reductions in systolic blood pressure (mean difference -2.77 mmHg; 95% CI -4.16 to -1.38) and total cholesterol (-0.10 mmol/L; 95% CI -0.20 to 0.00), with increased preventive treatment intensification. No reduction in CVD events was demonstrated (RR 1.01; 95% CI 0.95–1.08); certainty was low. Electronic decision-support interventions may improve blood-pressure target attainment, but evidence for lipid and glycaemic targets is inconclusive. Reported barriers include workforce, equipment, health-information-system, training, time, and local-validation constraints.

Conclusion: In primary care, CVD risk assessment may modestly improve risk-factor management and preventive treatment targeting, but its effect on CVD events remains uncertain. Implementation should prioritise simple, locally validated tools integrated into clinical workflows and supported by training and functional information systems.

CO-282: CHECKING PROJECTIONS: COMPARING NORTHERN TUNISIA CANCER REGISTRY DATA TO INTERNATIONAL ESTIMATES

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Introduction: In Tunisia, due to the absence of actualized data, cancer registries rely on projections. Comparing local cancer projections to an independent international data source can

help verify the Results validity of the Northern Tunisian cancer Registry (NTCR). Our study aimed to compare cancer forecasts from a NTCR to international modeled-estimates (GLOBOCAN) for Tunisia as a whole.

Methods: Using cancer cases from the NTCR between 1994-2014, forecasts for the year 2022 were produced for twelve priority cancer types. These forecasts were then compared to GLOBOCAN 2022 modeled-estimates published by the International Agency for Research on Cancer for Tunisia as a whole. Since the registry catchment area represents approximately 40-50% of the national population, the expected ratio between the local forecast and the national estimate was calculated for each cancer-type and compared to this expected range.

Results: The median ratio between the local forecast and the national GLOBOCAN estimate across the twelve cancer types was 0.42, within the expected range of 0.4-0.5 based on the population covered by the registry. Most cancer types fell within or close to this range. A few notable exceptions were observed: colon cancer had a higher ratio (0.81), while rectosigmoid junction (0.19), cervix-uteri (0.34), and ovary (0.29) had lower ratios than expected.

Conclusion: This work has demonstrated a consistency between national projections and an independent international estimated cancer data which supports the validity of the projected data of the NTCR. External validation should be standard, not an afterthought, as AI-assisted forecasting becomes routine in epidemiological surveillance.

CO-283: HEALTHCARE-ASSOCIATED INFECTIONS: PREVALENCE AND ASSOCIATED FACTORS AT FARHAT HACHED U.HOSPITAL 2025

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Introduction: Healthcare-associated infections (HAIs) represent a major patient-safety problem and an important indicator of the quality of care. Their surveillance allows us to estimate their burden, identify their main risk factors, and guide infection prevention and control strategies. This study aimed to estimate the prevalence of HAIs and identify their associated factors within a university hospital of Tunisian Center.

Methods: We conducted a prevalence survey in the Farhat Hached University Hospital from December 2 to 13 of the year 2025, using a standardized methodology since 2017 within the 22 hospital departments including the emergency department. Were included, all patients hospitalized on the day of the survey, with a length of stay ≥ 48 hours. Data were collected in one day per unit from medical records, prescriptions, microbiological **Results**, surgical reports, and interviews with healthcare professionals and patients.

Results: A total of 330 patients were included, 51.5% were male. Median length of stay was 15 days IQR [3-13], and the predominant age group was over 45 years (52.5%). Most patients were hospitalized in medical wards (58%), compared to 26% in surgical wards and 16% in intensive care. The prevalence of infected patients was 11.2% (37/330), corresponding to a prevalence of HAIs of 12.4% (41/330). According to the infection-site, 36.6% were related to vascular access (25.4% related to peripheral venous catheters), followed by urinary tract infections (14.6%) and surgical site infections (12.2%). Microbiological confirmation was obtained for 51.2% of

HAIs, 25% of which were due to multidrug-resistant bacteria (MDRB). Factors associated with the occurrence of a HAI were neutropenia (OR=8.08; 95% CI [2.24–29.07]; $p=0.001$), the presence of a central venous catheter (OR=5.80; 95% CI [2.36–14.35]; $p<0.001$), a hospital stay >7 days (OR=3.47; 95% CI [1.57–7.68]; $p=0.002$), and emergency admission (OR=2.18; 95% CI [1.01–4.72]; $p=0.047$).

Conclusion: This survey highlights a significant prevalence of HAIs and underscores the importance of strengthening preventive measures, particularly regarding the use and monitoring of invasive vascular devices and microbiological identification, in order to limit the spread of MDRB.

CO-284: UNDERSTANDING PATIENT DELAY IN COLORECTAL CANCER IN TUNISIA, A RETROSPECTIVE COHORT STUDY

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Introduction: Colorectal cancer (CRC) incidence is rising steadily in Tunisia, and most patients are diagnosed at an advanced stage. The time between the first symptom and the first medical consultation, called patient delay (PD), is a key step in care pathway. Our study aimed to estimate PD in CRC and identify its determinants in Tunisia.

Methods: A retrospective cohort study was conducted at the Salah Azaiez Institute in 2025 among patients with histologically confirmed CRC. Data were collected from patient records completed with face-to-face interviews. PD was defined, per the Aarhus statement, as an interval ≥ 3 months between symptom onset and first consultation. Associated factors were assessed using univariate and multivariate logistic regression.

Results: A total of 180 patients were included (mean age: 61.6 ± 10.5 years, sex-ratio(M/F)=1.3 , 48.3% primary school level). A change in bowel habits was the most frequent presenting symptom (59.4%). Most patients (92.3%) presented at stage III/IV. Median PD was 61 days (Interquartile range (IQR):10-170.8), and 43.9% experienced PD. In univariate analysis, marital status ($p<0.001$), lack of initial symptom knowledge ($p<0.001$), symptom trivialization ($p<0.001$), and alternative medicine ($p=0.023$) were significantly associated with PD. In multivariate analysis, three factors remained independently associated to PD: lack of symptom knowledge (aOR=11.5;95% Confidence Interval (CI):5.1-25.9; $p<0.001$), symptom trivialization (aOR=8.9;95%CI 3.5-22.5; $p<0.001$), and alternative medicine (aOR=26.8;95% CI:3.0-237.6; $p=0.003$).

Conclusion: Nearly half of CRC patients presented delay to first consultation. Most patients presented at a late stage. Main associated factors were poor patient literacy about CRC. Public awareness and education about CRC are highly recommended

in Tunisia.

CO-285: DIAGNOSTIC DELAY IN COLORECTAL CANCER IN TUNISIA: ROLE OF ACCESS TO CARE AND COORDINATION

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Introduction: Beyond the patient's own delay in seeking care, the time between the first medical consultation and histological confirmation of colorectal cancer (CRC), called diagnostic delay (DD), reflects how well the health system responds. Our study aimed to estimate DD in CRC and identify its determinants in Tunisia.

Methods: A retrospective cohort study was conducted at the Salah Azaiez Institute among patients with a histologically confirmed CRC. Key dates were collected from face-to-face interviews and medical files. DD was defined, per the Aarhus statement, as an interval ≥ 1 month between first consultation and diagnosis. Associated factors were assessed using univariate/multivariate logistic regression.

Results: A total of 180 patients were included. Most patients (83.3%) lived within 10km of a health facility, a specialist appointment was obtained within one month for 85.6% of patients, and a diagnostic colonoscopy obtained within two weeks for 87.8%. Median DD was 20 days (Interquartile range (IQR):5-65.8), with 46.7% experiencing a delay ≥ 1 month. In univariate analysis, distance ≥ 10 km ($p=0.04$), lack of coordination between physicians ($p<0.001$), difficulty obtaining a colonoscopy and specialist appointment (respectively $p<0.001$, $p=0.007$), were significantly associated with DD. In multivariate analysis, two factors remained independently associated: difficulty obtaining a specialist appointment beyond two weeks ($aOR=5.03$;95% Confidence Interval (CI):1.63-15.56; $p=0.005$) and difficulty obtaining a colonoscopy appointment beyond two weeks ($aOR=3.73$;95%CI:1.09-12.77; $p=0.036$).

Conclusion: Despite generally favorable geographic access, nearly half of CRC patients face a DD driven by organizational bottlenecks in specialist and endoscopic scheduling. Strengthening equitable access to care with a well organized pathways are highly needed.

CO-286: THE BREAST CANCER KNOWLEDGE-PRACTICE GAP AMONG TUNISIAN WOMEN: INSIGHTS FROM A CASE-CONTROL STUDY

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Introduction: Breast cancer (BC) is the leading cause of cancer death among women in low/middle-income countries (LMICs), including Tunisia, where late-stage diagnosis remains common. Our study aimed to compare BC-related knowledge, health beliefs, and preventive practices between women diagnosed with BC and cancer-free women in Tunisia.

Methods: This case-control study was conducted between January and April 2026. Cases were women with histologically confirmed BC recruited from the Salah Azaiez Institute; controls were women with no personal history of BC or malignancy recruited from four primary health care centers in Greater Tunis. Data were collected through a structured, interviewer-administered questionnaire assessing sociodemographic characteristics, knowledge, health beliefs, attitudes, and preventive practices.

Results: A total of 231 women were included (115 cases, 116 controls). Cases had significantly higher overall knowledge scores than controls (75.5 ± 8.2 vs. 70.1 ± 17.1 out of 110; $p=0.031$), driven mainly by better risk-factor knowledge (32.9 ± 6.3 vs. 29.6 ± 6.9 ; $p<0.001$), while symptom-recognition scores remained low in both groups (17.4 ± 10.5 vs. 16.6 ± 10.7 ; $p=0.548$). Cases reported more favorable attitudes, but preventive practices did not differ significantly between groups. In multivariable analysis, university-level education ($aOR=5.72$, 95%CI:2.43-13.49; $p<0.001$), family history of BC ($aOR=2.29$, 95%CI:1.22-4.32; $p=0.010$), and case status ($aOR=1.98$, 95%CI:1.05-3.73; $p=0.034$) were associated to good knowledge. Meanwhile, three factors remained independently associated to good preventive practices: good knowledge ($aOR=3.84$, 95%CI:1.98-7.43; $p<0.001$), regular physical activity ($aOR=2.00$, 95%CI:1.11-3.61; $p=0.021$), and university-level education ($aOR=1.93$, 95%CI:1.01-3.70; $p=0.046$).

Conclusion: Despite better disease-specific knowledge among women living with BC, a persistent knowledge-practice gap was observed in both groups. Priority should be given to improving symptom recognition, promoting preventive practices, and integrating psychological support into BC care.

CO-287: HUMAN PAPILLOMAVIRUS VACCINATION ACCEPTABILITY: SOCIO-DEMOGRAPHIC DETERMINANTS IN MONASTIR, TUNISIA

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Introduction: Human papillomavirus (HPV) vaccination is a highly effective strategy for preventing cervical cancer. However, the success of vaccination programs largely depends on population acceptance. This study aimed to estimate the acceptability rate of HPV vaccination and to describe the socio-demographic characteristics in Monastir, Tunisia.

Methods: A cross-sectional study took place at the Reproductive Health and Population Center in Monastir, Tunisia, from October 2025 to January 2026, involving women who visited the center for consultations. Data collection was carried out using a structured questionnaire, which was designed based on the literature. This questionnaire included the sociodemographic characteristics, knowledge about HPV infection and vaccination, and the attitudes toward HPV vaccination, including how acceptable they found the vaccine.

Results: The study included 187 participants, all women, with a mean age of 39.1 ± 8.6 years.

Among the 186 valid responses regarding HPV vaccine acceptability, 60 participants (32.3%) expressed willingness to receive the vaccine, while 126 (67.7%) reported refusal or reluctance.

The majority of those who accepted the vaccine were aged between 30 and 45 years. A significant proportion were married (86.7%), followed by single (8.3%). The mean number of children was 2.44 ± 1.14 . Educational attainment was predominantly at the secondary level (51.7%), followed by primary education (25%) and university education (21.7%). The majority were employed (65.0%), while (26.7%) were housewives. Vaccine acceptability was more prevalent among women with higher educational levels and those who were professionally active.

Conclusion: The findings reveal a relatively low level of HPV vaccine acceptability. This highlights the need for targeted awareness and educational interventions to improve knowledge about HPV infection and promote vaccine uptake.

CO-288: ADVERSE CHILDHOOD EXPERIENCES AND HEALTH RISK BEHAVIORS: COMPARISON OF FOUR VULNERABLE POPULATIONS

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Introduction: Adverse childhood experiences (ACEs) are highly prevalent worldwide and are associated with long-term mental health and behavioral risks, particularly among vulnerable populations. This study aimed to compare exposure to ACEs and

health risk behaviors-particularly substance use and suicidal behaviors-across three vulnerable populations in Tunisia: youth, prisoners and People living with HIV (PLHIV).

Methods: We performed four cross-sectional studies among three populations: schooled youth (in the region of Mahdia, 2020), PLHIV (in the region of Monastir, 2019-2025) and prisoners (male in the region of Mahdia, 2023 and female in the region of Sousse, 2024). The same questionnaire was used across all surveys. To measure ACEs, we used the validated Arabic version of the World Health Organization ACE questionnaire. Substance use and suicidality were assessed using binary (yes/no) questions. Depressive symptoms were evaluated using the validated Arabic version of the Hospital Anxiety and Depression Scale- Depression subscale (HAD-D).

Results: A total of 2684 participants were recruited, with a mean age of 22.25 ± 9.8 years. Exposure to ACEs was widespread across all populations (>90% intra-familial; >85% social). Adolescents showed the highest prevalence of intra-ACEs, particularly emotional abuse, while prisoners reported higher physical abuse and the highest exposure to social ACEs, notably community and collective violence. Childhood sexual abuse was most prevalent among PLHIV, who also reported higher peer violence. Substance use and depressive symptoms were significantly more common among prisoners and PLHIV. Suicidal ideation was highest among PLHIV (51.5%), whereas self-harm was most frequent among prisoners. Males reported greater substance use and social ACEs, and females-particularly adolescents and prisoners-showed higher suicidality. High levels of ACEs and marked population-specific patterns of mental health and behavioral risks among vulnerable populations emphasize the importance of tailored, trauma-informed prevention and care strategies.

Conclusion: High levels of ACEs and marked population-specific patterns of mental health and behavioral risks among vulnerable populations emphasize the importance of tailored, trauma-informed prevention and care strategies.

CO-289: SLEEP DISORDERS AMONG THE PRISON POPULATION IN TUNISIA

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Introduction: Prison constitutes a highly stressful environment that can disrupt biological rhythms and increase vulnerability to psychiatric disorders. Sleep disturbances are particularly common in this setting and can significantly affect the mental health of incarcerated individuals. This study aims to assess sleep quality and sleep patterns in the prison setting and to examine their impact on daily functioning.

Methods: Two cross-sectional studies were conducted in two civil prisons in Tunisia, the first in 2023 and the second in 2024. An anonymous, self-administered questionnaire was used,

including the validated Arabic version of the Pittsburgh Sleep Quality Index (PSQI). Participation was voluntary.

Results: The sample comprised 403 men (71%) and 165 women (29%), with a mean age of 31 ± 10 years (range: 18–91). The majority were Tunisian (94%) and single (51.8%). Educational attainment was predominantly secondary education (47.9%). Sleep quality was impaired in two-thirds of participants, who rated their sleep as “fairly bad” or “very bad.” Nearly half reported prolonged sleep latency. Sleep duration was less than 6 hours per night in 43% of inmates, while only 24% achieved ≥ 7 hours. Sleep efficiency was preserved in 45%. Moderate to severe nighttime disturbances affected 73% of respondents. The use of hypnotic medication remained limited (23%, including 15% regular users). Finally, nearly half of participants had moderate to severe daytime dysfunction, reflecting a marked impact on alertness and daily functioning.

Conclusion: Our findings call for targeted interventions to improve sleep hygiene and reduce the psychological burden associated with incarceration.

CO-290: PERCEPTIONS AND USE OF HEATED TOBACCO PRODUCTS (IQOS) AMONG YOUNG ADULTS IN TUNISIA: A CROSS-SECTION

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Introduction: Heated Tobacco Products (HTPs) like IQOS are marketed as reduced-harm alternatives to conventional cigarettes, yet their public health impact remains uncertain, particularly among youth. This study aimed to assess patterns of use, perceptions, and factors associated with HTP use among young adults in Tunisia.

Methods: A cross-sectional online survey was conducted from October 12 to November 16, 2025, targeting Tunisian residents aged 18–35. Data were collected via a structured self-administered questionnaire distributed through social media and university networks. A total of 359 valid participants were included in the final analysis.

Results: The sample was predominantly female (72.4%) and aged 26–30 years (44.3%). Current IQOS use was reported by 23.1% of participants, while 28.4% had tried it but were not currently using it. Among current users, 89.2% were prior smokers of conventional cigarettes. The main reasons for trying IQOS were perceptions of reduced harm (38.9%) and curiosity (36.1%). Notably, 56.5% of current users reported that using IQOS increased their overall nicotine consumption. Perceptions were conflicting: while 54.3% found IQOS socially acceptable, 76.1% correctly agreed it contains harmful chemicals, yet 14.1% incorrectly believed it contains no nicotine. Additionally, 38.2% of current users reported exposure to IQOS advertising in the past 30 days.

Conclusion: HTP use in this population appears to reinforce existing smoking habits rather than serve as a cessation tool, potentially increasing nicotine dependence. The high prevalence of use and advertising exposure, combined with conflicting risk perceptions, underscore the urgent need for targeted public health campaigns and stricter regulatory enforcement in Tunisia.

CO-291: FIFTEEN YEARS OF HEALTHCARE-ASSOCIATED INFECTION SURVEILLANCE: POINT PREVALENCE SURVEYS, 2010–2025

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Introduction: Healthcare-associated infections (HAIs) are a major worldwide public-health problem, but less data is available on the long-term trends of HAIs and antimicrobial use in Tunisia. We aimed to evaluate the prevalence, long-term trends, and risk factors of HAIs in the university hospital of Kairouan (Tunisia) from 2010 to 2025.

Methods: Successive point-prevalence surveys (PPS) were conducted annually from 2010 to 2025 to monitor the prevalence of HAIs at Ibn Al Jazzar university hospital in Kairouan (Tunisia). The surveys used the case definition criteria established by the Centres for Disease Control (CDC) of Atlanta. Data on patient characteristics, medical devices, active HAIs, and antimicrobial use were collected using a standard data-collection form.

Results: A total of 2263 inpatients were included; 163 HAIs were recorded in 149 patients, with an overall prevalence of HAIs of 7.2%. Respiratory Tract Infection was the most frequent HAI (31.4%), followed by Urinary Tract Infection (19%) and Blood Stream Infection (18.4%). Significant changes in HAIs were observed during the fifteen years. In a breakpoint analysis to identify trend in HAIs rates, we identified a breakpoint in 2013. the prevalence of HAIs decreased significantly by an average of 28.8% per year ($APC = -28.8\%$; 95% CI: -56.7 to -0.6 ; $p = 0.043$). From 2013 onward, a reversal trend was observed, with a non-significant increase of 9.4% per year ($APC = +9.4\%$; 95% CI: -0.3 to $+33.6$; $p = 0.057$). Over the entire 2010–2025 period, no significant overall trend was identified ($AAPC = +0.4\%$; 95% CI: -5.5 to $+6.8$; $p = 0.764$). 50 microorganisms were identified and *Escherichia coli* was the most frequently isolated pathogen (44.0%), followed by *Klebsiella pneumoniae* (22.0%). Multivariate analysis showed that independent risk factors significantly associated with HAI were undernutrition, neutropenia, surgical intervention, peripheral vascular catheter, length of stay > 7 days, and ICU ward type.

Conclusion: this successive point-prevalence survey provides information about the trend of HAI prevalence at the teaching hospital of Kairouan (Tunisia). To minimize the burden of HAIs, infection prevention and control programs and antibiotic stewardship may be effective strategies to minimize the risk of HAIs.

CO-292: STUDY OF DOMESTIC VIOLENCE PREVALENCE AMONG PREGNANT WOMEN AT SOUSSE MATERNITY HOSPITAL.

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Introduction: This study examines the prevalence of domestic violence among parturient women at Sousse Maternity Hospital (Tunisia) and its association with psychological distress. **Objective:** The study aimed to determine the prevalence of all forms of domestic violence—physical, sexual, and psychological—among women hospitalized for childbirth at the Farhat Hached University

Methods: A cross-sectional study was carried out over six months on a sample of 384 parturient women. Multiple validated instruments were used to screen for domestic abuse and psychological distress, including the NorVold Domestic Abuse Questionnaire (NORAQ), the Rosenberg Self-Esteem Scale (RSE), the Pittsburgh Sleep Quality Index (PSQI), the GAD-7 anxiety scale, and the Edinburgh Depression Scale (EDS).

Results: Psychological violence was the most common form, affecting 61.6% of women, mostly perpetrated by men (including current husbands in nearly half of cases), and associated with significant distress—sleep disturbances, moderate-to-severe anxiety, and low self-esteem—in 35.9% of victims. Physical violence affected 33.6% of participants, mainly by current partners, and correlated with anxiety (59.5%) and moderate depression (21.1%). Sexual violence, though less frequent (30.4%), was linked to severe anxiety (11.2%) and moderate depression (33.3%).

Conclusion: Domestic violence against pregnant women remains widespread and often hidden in Tunisia, significantly harming victims' self-esteem and mental health. The findings underscore the urgent need for targeted interventions, victim support, provider training, and stronger protective measures.

NÉONATOLOGIE

CO-293: FACTORS ASSOCIATED WITH IN-HOSPITAL MORTALITY IN TERM NEWBORNS WITH HYPOXIC-ISCHEMIC ENCEPHALOPATHY

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Introduction: Hypoxic-ischemic encephalopathy (HIE) remains a major cause of neonatal morbidity and mortality. Identifying early prognostic factors is essential for optimizing the management of affected newborns. This study aimed to identify factors associated with in-hospital mortality among term newborns with HIE in Tunisia.

Methods: We conducted a retrospective, descriptive and analytical multicenter study including term newborns diagnosed

with perinatal asphyxia and admitted to six Tunisian university neonatal intensive care units between January and December 2020. Maternal, obstetric and neonatal characteristics, severity of HIE according to the Sarnat staging system, multivisceral involvement, management and outcome were collected. Factors associated with mortality were analyzed using univariate and multivariate analyses. Statistical significance was set at $p < 0.05$.

Results: A total of 183 term newborns were included. Twenty-seven newborns died, corresponding to an in-hospital mortality rate of 14.8%. Mortality was significantly associated with the severity of HIE. The Sarnat stage was significantly associated with mortality ($p < 0.001$), with higher mortality observed in stage III HIE. Multivisceral failure ($p = 0.019$), hemodynamic disturbances ($p < 0.001$), renal failure ($p = 0.001$), and the need for respiratory support ($p < 0.001$) were also associated with mortality. An Apgar score < 3 at 1 minute and < 7 at 5 and 10 minutes was significantly associated with a higher risk of death. In multivariate analysis, the Sarnat stage was the only independent factor associated with mortality, with an OR of 5.1 for stage II versus stage I and 19.8 for stage III versus stage I.

Conclusion: In this Tunisian multicenter cohort, HIE was associated with substantial in-hospital mortality. The severity of HIE according to the Sarnat staging system was the only independent predictor of mortality. Early recognition of severe HIE and prompt neonatal management are essential to improve outcomes.

CO-294: HIGH BREAST MILK SODIUM AND NEONATAL HYPERNATREMIC DEHYDRATION: CLINICAL FEATURES AND OUTCOMES

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Introduction: Neonatal hypernatremic dehydration (NHD) is a rare but severe condition often exacerbated by inadequate breastfeeding.

This study aimed to describe the clinical, laboratory, and therapeutic characteristics of affected neonates.

Methods: A retrospective study was conducted between January 2022 and July 2026 at Bechir Hamza Children's Hospital in Tunis, including exclusively breastfed neonates admitted for NHD (serum sodium ≥ 145 mmol/L). Clinical data, breast milk sodium levels, management, and patient outcomes were analyzed.

Results: Seventeen neonates were included, with a slight female predominance (F:M ratio = 1.12) and a median admission age of 4 days. Most births occurred during summer (16/17), and 10 of the 17 mothers were primiparous. Fever was the most frequent symptom (12/17). All infants presented with weight loss (median: 13% [6–40%]) and hypernatremia (median serum sodium: 154 mmol/L [147–190]). Mean breast milk sodium concentration was elevated (50.8 ± 21.6 mmol/L). Complications included acute kidney injury in 10 patients and one death following seizures and apnea. All neonates received intravenous fluid therapy (median duration: 48 hours), with a median hospital stay of 4 days.

Conclusion: NHD linked to high breast milk sodium is rare but potentially fatal. It should be promptly suspected in breastfed neonates presenting with fever and excessive weight loss to ensure timely rehydration and prevent serious neurological and renal complications.

CO-295: ASSOCIATION BETWEEN DELIVERY ROOM HYPOTHERMIA AND EARLY NEONATAL MORTALITY IN A COHORT OF VERY PRETE

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Introduction: Very preterm infants and very low birth weight (VLBW) infants are particularly vulnerable to delivery room (DR) hypothermia due to thermal regulation immaturity, skin barrier fragility, and frequent active resuscitation interventions in the DR.

The objective of the study was to evaluate the association between hypothermia ($< 36.5^{\circ}\text{C}$) at the end of DR resuscitation and early neonatal mortality in this population.

Methods: We included inborn neonates with a gestational age (GA) < 33 weeks and/or a birth weight (BW) < 1500 g whose core temperature was measured at the end of DR resuscitation. The study period ranged from June 1, 2024, to June 30, 2026. Outborn infants and stillbirths were not included. Exclusion criteria were major congenital malformations, confirmed or suspected genetic syndromes and incomplete medical records.

Results: A total of 197 neonates were included. Mean GA was 29.9 ± 2.3 weeks [24–35] and mean BW was 1405.2 ± 461.9 g [565–3850]. Endotracheal intubation in the DR was required in 17.8% of cases. Mean Apgar scores at 1 and 5 minutes were 6.7 ± 2.0 [1–9] and 7.9 ± 1.9 [1–10], respectively. DR hypothermia was documented in 70.1% of the cohort. The overall early neonatal mortality rate was 22.3%.

Early mortality was higher in the hypothermic group compared to the normothermic group (25.4% vs. 15.3%; $p = \text{NS}$).

Conclusion: Although early neonatal mortality was higher among hypothermic infants, the lack of statistical significance is likely attributable to limited sample size.

CO-296: PSYCHOLOGICAL IMPACT OF PREMATURITY ON PARENTS AND HEALTHCARE STAFF KNOWLEDGE IN A NEONATAL INTENSIV

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Introduction: Premature birth profoundly disrupts parenthood. While high-tech Neonatal Intensive Care Unit (NICU) environments generate severe parental distress, the psychological impacts on parents remain insufficiently explored nationally. This study aimed to analyze parental emotional responses to prematurity and assess healthcare staff knowledge regarding parental psychological impacts and supportive care strategies.

Methods: A descriptive cross-sectional study was conducted in a neonatal medicine and resuscitation unit, involving two populations: 40 NICU healthcare staff and 50 parents of premature infants. Parental stress was evaluated using the Parental Stress Scale: NICU (PSS:NICU).

Results: Among healthcare staff, 65% experienced emotional difficulties supporting parents, and 72.5% identified additional training as essential. Staff knowledge was categorized as good (70%) or moderate (30%), with grade seniority being the sole determinant of knowledge level. All parents reported high emotional burden: sadness (96%), anxiety (88%), and guilt. Overall parental stress was moderate (mean PSS:NICU score: 2.3 ± 0.3), peaking in the "parental role alteration" domain. Significant correlations were found between parental stress levels and parental education level, length of hospitalization, and birth weight.

Conclusion: Prematurity presents major medical and psychological challenges. Beyond clinical care, parental support demands a holistic, individualized approach in which pediatric nurses play a central, indispensable role.

CO-297: ENHANCING STAFF KNOWLEDGE AND PRACTICES REGARDING NOISE POLLUTION IN THE NICU: A PRE-POST EVALUATION

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Introduction: Noise in neonatal intensive care units (NICUs) jeopardizes the safety and neurological development of preterm newborns. This study aimed to assess the staff's initial knowledge regarding noise, and then to measure the impact of an awareness intervention on the evolution of their knowledge and practices.

Methods: A quasi-experimental study (pre-test/post-test) was conducted with medical and paramedical staff in a NICU. The intervention consisted of a structured awareness session delivered via a short educational video (video capsule) on pathophysiological issues related to noise, coupled with a visual reminder ("Silence Memo"). The evolution of theoretical knowledge and self-reported practices was analyzed by profession and seniority using statistical tests.

Results: A total of 45 out of 55 invited professionals were included in the study, yielding an 82% response rate. The mean knowledge score increased significantly from 2.8/8 at the pre-test to 6.6/8 at the post-test ($p = 0.001$). Awareness of the 45 dB standard rose from 22% to 100%, and assimilation of neurological risk from 0% to 91%. Self-reported practices improved ($p = 0.001$): 73% now anticipate alarms and 84% avoid placing objects on incubators. The effectiveness was universal, with no significant differences by profession ($p = 0.08$) or seniority ($p = 0.69$). Finally, 100% of participants approved the visual memo.

Conclusion: A structured awareness campaign combined with visual reminders is an effective and highly approved method. These findings support its adoption to transform intended professional practices and the environmental culture in Tunisian NICUs.

CO-298: PREVALENCE OF REFEEDING SYNDROME IN PRETERM INFANTS

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Introduction: Refeeding syndrome (RFS) is a metabolic disorder that may occur after initiating or rapidly increasing nutritional intakes. Preterm infants are at high risk.

The aim of the study was to evaluate the prevalence of RFS in preterm infants.

Methods: We conducted an observational study in the neonatal intensive care unit (NICU) of Charles Nicolle Hospital from January to July 2026. We included preterm infants with gestational age (GA) ≤ 32 weeks and birth weight (BW) ≤ 1500 g. All preterm infants received nutritional support according to the department's nutrition protocol, which is based on the ESPGHAN recommendations. We analyzed serum calcium, phosphorus, magnesium, and blood electrolytes on day 2 and between days 5 and 7 of life. We considered the following biochemical criteria for the definition of neonatal RFS: hypercalcemia > 2.8 mmol/L, hypophosphatemia < 1.6 mmol/L. Severe hypophosphatemia defined as serum phosphore level < 1 mmol/L.

Results: During the study period, 56 preterm infants were eligible. Mean GA was 28.4 ± 2.77 week (25-32), mean BW was 1144.18 ± 236.73 (635-1490). Intrauterine growth restriction was noted in 21.4%.

The prevalence of RFS was (12/56 ; 21.4%). We observed hypercalcemia in (12/56 ; 21.4%) cases, hypophosphatemia in (27/56 ; 48.2%) cases and severe hypophosphatemia in (18/56 ; 32.1%) cases. No case of hypomagnesemia was observed. In preterm with RFS, severe hypophosphatemia was noted in (9/12) cases, hypokalemia in (2/12) cases.

Conclusion: In our study population, RFS is relatively common. Careful monitoring of nutritional support, with early optimization of electrolytes intake, may reduce the incidence and the severity of RFS.

CO-299: ASSESSMENT OF VITAMIN D STATUS IN A POPULATION OF VERY LOW BIRTH WEIGHT INFANTS

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Introduction: Vitamin D is essential for preterm infants, it has a crucial role on calcium-phosphorus homeostasis and is essential for optimal postnatal growth.

The aim of the study was to assess vitamin D status in a population of preterm infants.

Methods: We conducted a prospective study in preterm infants with gestational age (GA) ≤ 32 weeks and a birth weight (BW) ≤ 1500 g, in the neonatology department of Charles Nicolle Hospital, over the period from January to July 2026.

Oral vitamin D supplementation was 800 IU/day once enteral nutrition reached 120 mL/kg/day.

We analyzed serum (25OHD), calcium, phosphorus, magnesium, alkaline phosphatase (AP) and PTH, on day 30 of life.

Results: During the study period, 30 preterm infants were eligible. Mean GA was 28 ± 1.87 weeks (25-32), mean BW was 1121.3 ± 264.8 (635-1480). Mean serum 25(OH)D level was 13.8 ± 5.1 ng/mL (8-27,7). Prevalence of vitamin D deficiency was 86.5%, of severe deficiency was 41%, of insufficiency was 13.5%. No preterm presented vitamin D sufficiency. No cases of vitamin D toxicity was observed. Serum calcium and magnesium were in the normal range for all preterm. Hypophosphatemia was noted in 36% of cases. PTH > 70 pg/mL was noted in 60.1% of cases. AP > 500 U/L was noted in four preterms and AP > 800 U/L was noted in one preterm infant.

Conclusion: We reported high prevalence of vitamin D deficiency in preterm infants receiving 800 IU/day of oral supplementation.

This finding prompted us to reconsider the optimal vitamin D supplementation dose in preterm infants.

CO-300: IMPACT OF ENTERAL NUTRITION ON TOTAL ENERGY INTAKE AND POSTNATAL GROWTH IN VERY PRETERM INFANTS

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Introduction: Postnatal growth retardation (PNGR) is a universal health concern among very preterm infants. The aim of our study was to assess the prevalence of PGR at discharge and to evaluate the impact of enteral nutrition on postnatal growth.

Methods: We conducted a descriptive retrospective study in the Neonatology Department of Charles Nicolle Hospital in Tunis over a three-year period (June 2019–June 2022).

Results: During the study period, 68 preterm infants were eligible. Prevalence of PNGR was 45.6%. Mean weight gain was 15.43 ± 5.26 g/day (5.93-33.33), and mean growth velocity was 0.63 ± 0.36 (0.15-2.11).

Enteral feeding was initiated at a median of 2 days of life (1-15). It accounted for more than 50% of total nutritional intake by a median of 13 days (6-45), while full enteral feeding was achieved at a median of 22 days (8-60).

Mean caloric intake at 28 days of life was positively correlated with growth velocity ($r=0.33$; $p=0.005$) and the day of full enteral feeding ($r=0.42$; $p=0.001$).

We also observed a positive correlation between growth velocity and the day of achieving 50% enteral feeding ($r=0.62$; $p=0.01$) and the day of full enteral feeding ($r=0.62$; $p=0.001$).

Conclusion: Our findings highlight the positive impact of enteral feeding on postnatal growth. Optimal enteral feeding optimizes macronutrient and energy intake and potentially reduces the risk of PNGR.

OPHTALMOLOGIE

CO-301: TOXOPLASMIC CHORIORETINITIS: PRESENTATION AND CLINICAL FORMS IN IMMUNOCOMPETENT PATIENTS

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Introduction: Ocular toxoplasmosis is a major cause of posterior uveitis and may lead to significant visual impairment, particularly when lesions involve the posterior pole.

Aim: To describe the clinical presentations and forms of toxoplasmic chorioretinitis in immunocompetent patients.

Methods: We conducted a retrospective study of 25 patients treated for toxoplasmic chorioretinitis. All patients underwent a detailed medical history assessment, a complete bilateral ophthalmological examination, fluorescein angiography, and toxoplasmosis serology. Anterior chamber paracentesis was

performed in atypical cases.

Results: The mean age was 22 years. Decreased visual acuity was the most common presenting symptom (60%), followed by floaters (16%), central scotoma (12%), and photopsia (12%). All cases were unilateral. Lesions were macular in 56%, juxtapapillary in 20%, and located in the mid-periphery in 20%. Associated findings included vitritis (52%), chorioretinal scars (40%), papillitis (24%), periphlebitis (8%), and serous retinal detachment (4%).

Conclusion: Toxoplasmic chorioretinitis presents with various clinical forms. Posterior pole involvement and dense vitritis may cause significant visual impairment. Early diagnosis and appropriate management are essential to preserve visual function and reduce the impact of recurrences.

CO-302: ROLE OF OCT ANGIOGRAPHY IN PREDICTING CARDIOVASCULAR RISK

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Introduction: Cardiovascular disease remains a leading cause of morbidity and mortality worldwide. Retinal microvascular alterations may reflect systemic vascular changes. Optical coherence tomography angiography (OCT-A) is a non-invasive imaging technique that enables the quantitative and qualitative assessment of retinal and choroidal microcirculation.

Aim: To evaluate the role of OCT angiography in predicting cardiovascular risk by identifying retinal microvascular changes associated with cardiovascular risk factors.

Methods: literature review

Results: OCT angiography revealed significant retinal microvascular changes in patients with increased cardiovascular risk. Reduced vessel density and perfusion density, as well as alterations in the foveal avascular zone, were associated with the presence and severity of cardiovascular risk factors. These findings suggest a correlation between retinal microvascular impairment and systemic cardiovascular risk.

Conclusion: OCT angiography may represent a promising non-invasive tool for the early detection of retinal microvascular alterations associated with cardiovascular risk. Its integration into the assessment of high-risk patients could contribute to improved cardiovascular risk stratification and early preventive management.

CO-303: OPHTHALMIC INVOLVEMENT IN PATIENTS TREATED BY RADIOTHERAPY FOR NASOPHARYNGEAL CARCINOMA

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Introduction: Nasopharyngeal carcinoma (NPC) has many factors incriminated for its development such as Epstein-Barr virus (EBV) infections, environmental exposures and genetic susceptibility. Radiotherapy offers an effective therapeutic option for this disease with efficacious in controlling the malignant lesion. However, other tissues will also be affected. There is many ocular complications related to this therapy. They early recognition is important for better prognosis.

Aim : The aim of the study is to evaluate eye damage in patients treated by radiotherapy for nasopharyngeal carcinoma.

Methods: The cross-sectional study was conducted from January 2023 to March 2026 at Tahar Sfar university Hospital, Mahdia, Tunisia, and comprised patients aged 25-68 years treated by radiotherapy for nasopharyngeal carcinoma. All the patients underwent ophthalmic examination and investigations.

Results: The study involved twenty five participants (50 eyes) with 29±6 months of follow-up (range 10-39, with 14 (55%) females and 11 (45%) males, aged 25-68. All subjects presented symptoms of dry eye, supported by both low tear breakup time and positive Schirmer test. Subcapsular cataract was found in nine patients, involving 18 eyes. Macular edema was seen in four eyes, where CMT ranged between 280.6 and 288 µm, exceeding 260 µm in 75% of eyes.

Conclusion: Ocular damage following local radiotherapy for NPC remains largely unknown. The susceptibility of ocular structures to radiation-induced damage is multifactorial and depends on several interacting factors. Having these risk factors identified is important for the optimization of treatment planning by making effective preventive strategies possible.

CO-304: QUANTITATIVE TEAR FILM ALTERATION IN CHILDREN WITH TYPE 1 DIABETES MELLITUS : A COMPARATIVE STUDY

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Introduction: Type 1 diabetes represents a major public health problem in the pediatric population. It may induce subclinical ocular surface abnormalities in children, even before the onset of diabetic retinopathy. Tear film alterations may therefore represent early markers of ocular involvement.

Aim : To compare objective tear film parameters between children with Type 1 diabetes and healthy controls

Methods: This was a cross-sectional, analytic comparative study conducted at the Department of ophthalmology of Tahar Sfar University Hospital, Mahdia. All participants underwent a comprehensive ophthalmic examination, including assessment of dry eye symptoms using the Schirmer test and tear meniscus height measurement.

Results: A total of 60 participants were included, comprising 30 children with Type 1 diabetes and 30 healthy controls, with both eyes analyzed (60 eyes per group). The mean age of the study population was 12,23 ± 3,42 years, with a slight female predominance (55%, sex ratio of 0,82). The two groups were compared in terms of age and sexe ($p=0,462$; $p=0,795$, respectively). Compared with healthy controls, children with Type 1 diabetes showed significantly lower Schirmer test values ($18,22 \pm 2,82$ mm versus $26,58 \pm 2,41$ mm; $p<0,001$), and reduced tear meniscus height ($0,132 \pm 0,037$ mm versus $0,198 \pm 0,027$ mm; $p<0,001$), indicating a significant reduction in tear secretion and tear volume. These findings suggest an early quantitative impairment of the tear film in type 1 diabetic children.

Conclusion: Children with Type 1 diabetes had significantly lower Schirmer test values and tear meniscus height than healthy controls, suggesting reduced aqueous tear production. These findings indicate that quantitative tear film abnormalities may be present in pediatric Type 1 diabetes and requires special attention.

CO-305: CENTRAL SEROUS CHORIORETINOPATHY AND OCCUPATIONAL IMPACT AMONG INTERNAL SECURITY FORCES PERSONNEL IN

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Introduction: Central serous chorioretinopathy (CSC) is closely linked to psychological stress. This study aimed to explain the relationship between CSC and occupational stress, and to describe the transient and permanent professional impact of this condition among internal security forces personnel in southwestern Tunisia.

Methods: Descriptive retrospective study of 11 patients with CSC followed in the ophthalmology department of an internal security forces hospital in southwestern Tunisia, between August 2013 and July 2017. All patients underwent a structured interview establishing their job profile, the triggering stress factor, number of consultations, absenteeism, episode duration, rest duration, exemption from certain duties, and professional reclassification. A complete ophthalmologic examination along with optical coherence tomography (OCT) and fluorescein angiography confirmed the diagnosis and clinical form.

Results: During their duty, all patients were armed and worked night shifts. All reported a stressful event immediately preceding disease onset. Mean visual acuity was 4/10 (Parinaud 6) across all clinical forms, ranging between 1/10 and 2/10 in the chronic form. Visual function impairment led to absenteeism, with a mean rest duration of 1.13 months per episode. Exemption from certain duties was required in 36.4% of cases (4/11 patients), and professional reclassification was necessary in 18.2% of cases (2/11 patients).

Conclusion: CSC affects patients' psychological well-being and impairs their quality of life, typically involving young, professionally active individuals. This condition can interfere with occupational performance and result in temporary or permanent work disability.

CO-306: EPIDEMIOLOGY OF REFRACTIVE ERRORS AMONG SCHOOLCHILDREN IN THE TOZEUR REGION: A CROSS-SECTIONAL STUDY

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Introduction: Refractive errors are a leading cause of correctable visual impairment in children and can affect school performance if left undiagnosed. Epidemiological data on ametropia among schoolchildren remain limited in southern Tunisia. This study aimed to describe the prevalence and characteristics of refractive errors among schoolchildren examined in the ophthalmology department of the Tozeur Regional Hospital.

Methods: We conducted a descriptive cross-sectional study from September 2024 to September 2025, including all schoolchildren aged 6 to 17 years referred for ophthalmological consultation at the Tozeur Regional Hospital. Sociodemographic, clinical, and

refractive data (cycloplegic skiascopy) were collected. Children with pathological fundus or anterior segment findings were excluded. Visual acuity was assessed before and after optical correction using the Snellen scale.

Results: Among 317 children examined, 314 were included (3 excluded for fundus pathology). The mean age was 10.98 ± 2.86 years, with a female predominance (60.5%). Emmetropia was found in 35 cases (11.15%). Ametropia was present in 279 children (88.85%), including hyperopia in 186 (59.24% of the total population; 66.67% of ametropias), astigmatism in 133 (42.36%; 47.67%), and myopia in 69 (21.97%; 24.73%). Hyperopia was predominantly bilateral (73%) and mild (84%). Myopia showed a significant correlation with older age ($p=0.028$) and was mostly bilateral (75.4%) and mild (64.5%). Anisometropia was observed in 32 patients (10.19%), significantly more frequent in myopic than hyperopic children (31.9% vs 5.4%, $p<0.001$). Reduced visual acuity and headache were the main presenting symptoms (58.9% and 50.6%, respectively), both significantly associated with ametropia. Amblyopia was diagnosed in 8 children (2.55%). Optical correction was prescribed in 96% of ametropic patients and led to marked improvement in visual acuity.

Conclusion: Refractive errors affect nearly nine out of ten schoolchildren examined in the Tozeur region, with hyperopia being the most frequent. These findings highlight the importance of systematic visual screening programs in schools to enable early detection and correction of ametropia, thereby preventing amblyopia and supporting optimal educational outcomes.

CO-307: PROGRESSIVE ACQUISITION OF SURGICALSKILLS IN FOUR-FLANGEDINTRASCLERAL IOL FIXATION USING LOW-FIDELIT

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Introduction: Four-flanged intrascleral fixation of a foldable intraocular lens (IOL) is a technically demanding procedure requiring precise microsurgical skills. Limited exposure to this technique may make initial training challenging. We evaluated the progression of surgical performance among ophthalmology residents undergoing a structured low-fidelity simulation program.

Methods: Eight ophthalmology residents participated in four low-fidelity simulation sessions performed at one-week intervals. The simulated procedure reproduced four-flanged intrascleral fixation of a foldable IOL. Surgical performance was assessed at each session using a global performance score based on an OSATS-inspired evaluation scale. Descriptive statistics were used to analyze score progression across the four sessions.

Results: Eight residents completed the four-session training program. The median global surgical performance score increased progressively from 4.5 (range, 4–5) at the first session to 9.5 (9–10) at the second, 10 (9–11) at the third, and 12.5 (12–13) at the fourth session. This progressive increase in median scores was associated with a narrowing of the score range during the final session, suggesting more consistent performance among participants after repeated practice.

Conclusion: A structured low-fidelity simulation program was associated with progressive improvement in global surgical performance during training in four-flanged intrascleral IOL fixation. This approach may provide a reproducible environment for the acquisition and assessment of microsurgical skills before performing the procedure in the clinical setting.

CO-308: REFRACTIVE ERRORS IN SCHOOL-AGE CHILDREN: EPIDEMIOLOGICAL BURDEN AND EDUCATIONAL IMPACT IN TUNISIA

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Introduction: Uncorrected refractive errors remain one of the leading causes of preventable visual impairment in children. In Tunisia, recent epidemiological data on refractive errors among school-aged children remain scarce, the last reference study in a school population dating back to 2016. This study aimed to determine the distribution of refractive errors among school-aged children and their epidemiological and clinical features, and to assess the prevalence of associated amblyopia and the predictive factors of each type of refractive error.

Methods: We conducted a retrospective cross-sectional study of 314 school-aged children with refractive errors, aged 6 to 17 years, examined under cycloplegia at the Department of Ophthalmology, Tahar Sfar University Hospital, Mahdia. Predictive factors for each type of refractive error were identified using multivariate logistic regression.

Results: Refractive errors were distributed as hyperopia (59.2%), myopia (22.0%), and isolated astigmatism (18.8%). On multivariate analysis, total anisometropia was the strongest determinant of myopia (OR = 12.50) and a protective factor against pure hyperopia (OR = 0.23); middle school was associated with myopia (OR = 2.80) and primary school with hyperopia (OR = 1.95). Severe uncorrected visual acuity impairment ($\leq 3/10$) was the most robust cross-cutting determinant, doubling the risk of academic delay (40.1% vs 26.2%; $p = 0.020$) and lowering the school grade average by 2.9 points ($p < 0.001$). Screen exposure, nearly universal (68.8% ≥ 1 h/day), was correlated with declining academic performance ($\rho = -0.154$; $p = 0.013$). True functional amblyopia affected 1.3% of the cohort, but coexisted with substantial optical under-correction (9.2% of correctable acuity left uncorrected).

Conclusion: This work updates Tunisian epidemiological data on refractive errors in school-aged children and highlights the major functional impact of uncorrected visual acuity impairment on academic performance. These findings support a cycloplegic screening strategy targeting three critical windows (school entry, 4th grade of primary school, and transition to middle school) and a limitation of recreational screen exposure.

CO-309: THE IMPACT OF AI ON SCIENTIFIC WRITING: A COMPARATIVE ANALYSIS OF OPHTHALMOLOGY ARTICLES

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Introduction: Generative artificial intelligence (AI) is increasingly transforming scientific communication by facilitating manuscript drafting, editing, and correction. This study evaluated its potential impact on the quality of ophthalmology publications by comparing articles published before and after the emergence of ChatGPT. Our aim is to compare the linguistic characteristics, readability, clarity, and scientific rigor of ophthalmology articles published before and during the ChatGPT era.

Methods: A retrospective comparative analysis was performed on 34 open-access ophthalmology articles, with 17 published during the pre-ChatGPT era (2015–2020; G1) and 17 during the ChatGPT era (2023–2025; G2). Groups were matched by journal impact factor and article type, and reviewers were blinded to publication period. Grammatical and typographical errors were assessed using Grammarly, while lexical diversity, sentence complexity, and readability were evaluated using DeepSeek. Clarity and scientific rigor were assessed qualitatively.

Results: G1 and G2 were comparable regarding journal quartile and article type. Typographical errors were slightly lower in G2 than G1 (1.24 ± 1.8 vs. 1.53 ± 2.4), although not significantly ($p=0.892$). Grammar/structural errors were marginally higher in G2 (0.65 ± 0.93 vs. 0.41 ± 0.75 ; $p=0.413$). Lexical diversity was slightly lower in G2 (217.3 ± 80.8 vs. 232 ± 68 unique words/1000 words; $p=0.573$). Sentence length was comparable (19.6 vs. 19.8 words; $p=0.772$), while readability was slightly improved in G2 (Flesch score: 38.4 ± 8.5 vs. 35.9 ± 8.6 ; $p=0.17$). All articles were considered clear and scientifically rigorous.

Conclusion: The emergence of generative AI was not associated with significant changes in the linguistic quality of ophthalmology articles. The slight improvements in typographical accuracy and readability observed in the ChatGPT era suggest a potential supportive role for AI, while emphasizing the continued importance of human expertise and appropriate ethical oversight.

CO-310: CATARACT SURGERY UNDER TOPICAL ANESTHESIA: PATIENT AND SURGEON SATISFACTION

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Introduction: Topical anesthesia (TA) is increasingly used as an alternative to invasive anesthetic techniques for cataract surgery. This study evaluated its tolerability, efficacy, and satisfaction among patients and surgeons in routine clinical practice in Tunisia. Our aim is to assess patient and surgeon satisfaction, intraoperative pain, and surgical outcomes during phacoemulsification performed under TA.

Methods: This prospective study included 100 patients

undergoing phacoemulsification under TA between January and March 2024 at Mohamed Taher Maamouri Hospital, Nabeul, Tunisia. Demographic, clinical, and operative data were collected. Patient satisfaction was assessed using the Amsterdam Preoperative Anxiety and Information Scale (APAIS), Visual Analog Scale (VAS), and Iowa Satisfaction with Anesthesia Scale (ISAS). Surgeon satisfaction was evaluated using a VAS, and challenging surgical steps were recorded.

Results: The mean patient age was 65.2 ± 8.3 years. Mean surgical time was significantly shorter among experienced surgeons than less experienced surgeons (16 ± 10 vs. 30.6 ± 8.7 minutes). Intraoperative pain was low (VAS: 1.9 ± 1.4), with 84% of patients reporting minimal pain. Mean ISAS satisfaction score was 5.2 ± 0.6 , with 83% of patients reporting satisfaction. Patient satisfaction was slightly higher among those operated on by experienced surgeons. Capsulorhexis was considered the most challenging surgical step by 40% of surgeons.

Conclusion: Cataract surgery under TA appears to be safe, well tolerated, and satisfactory for both patients and surgeons. Appropriate patient selection and surgical experience may contribute to optimal outcomes. Further comparative and randomized studies are warranted to confirm these findings.

CO-311: CONTRIBUTION OF ANTERIOR SEGMENT OCT IN THE ASSESSMENT AND FOLLOW-UP OF CORNEAL WOUNDS

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Introduction: This study aims to evaluate the contribution of anterior segment optical coherence tomography (AS-OCT) in the assessment and follow-up of full-thickness corneal wounds compared with slit-lamp examination.

Methods: This prospective longitudinal study included 17 eyes with full-thickness corneal wounds between September 2024 and December 2025. AS-OCT (DRI OCT Triton, Topcon) using the AA-1 attachment was performed in radial (12 B-scans) and linear modes. Wound morphology, maximum corneal thickness (MCT), anterior chamber depth (ACD), and anterior chamber angles (ACA) were assessed preoperatively and at postoperative day 1, month 1, and month 3 following repair with 10-0 nylon sutures.

Results: AS-OCT demonstrated a linear hyperreflective tract extending through the full corneal thickness and identified intraocular foreign bodies, including intracameral (29.4%) and subendothelial (11.8%) locations. Preoperatively, ACD was reduced to 1.92 ± 1.18 mm and ACA to $27-28^\circ$. These parameters significantly improved as early as postoperative day 1 (ACD: 2.68 ± 0.5 mm; ACA: $37-39^\circ$; $p < 0.001$). MCT decreased from 697 ± 166.6 μ m at month 1 to 583 ± 108.6 μ m at month 3 ($p = 0.002$). Wound edges were well apposed in 58.9% of cases, while 23.5% showed a step-off, 11.7% a posterior gap, and 5.9% transfixing sutures.

Conclusion: AS-OCT provides superior characterization of full-thickness corneal wounds compared with slit-lamp examination, enabling early detection of complications and quantitative monitoring of corneal healing, particularly in the presence of

edema or corneal opacity.

OTO-RHINO-LARYNGOLOGIE

CO-312: VITAMIN D DEFICIENCY IN PRIMARY HYPERPARATHYROIDISM: CLINICAL AND BIOCHEMICAL IMPLICATIONS

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Introduction: The interplay between Vitamin D deficiency and Primary Hyperparathyroidism (PHPT) has significant implications for disease severity and surgical outcomes. This study aimed to investigate the association between preoperative Vitamin D status and the biochemical, clinical, and histological characteristics of patients with PHPT in a Tunisian cohort.

Methods: A retrospective cohort study was conducted on patients who underwent parathyroidectomy for sporadic PHPT from 2019 to 2025 at Charles Nicolle Hospital, Tunis. Vitamin D measurements were available for 46 patients (61.3%), stratified into deficient (<20 ng/mL, $n=26$) and non-deficient (≥ 20 ng/mL, $n=20$) groups. Biochemical parameters, clinical presentation, skeletal signs, disease type, and histological diagnosis were compared using the Mann-Whitney U test and Chi-square/Fisher's exact test.

Results: Vitamin D deficiency affected 56.5% of the cohort. All deficient patients (100%) had single-gland disease (SGD), whereas 20% of non-deficient patients had multiglandular disease (MGD) ($p=0.017$). Adenoma predominated in deficient patients (73.1% vs. 40.0%), while hyperplasia predominated in non-deficient patients (55.0% vs. 11.5%, $p=0.022$). Pathological fractures were more common in deficient patients (11.5% vs. 5.0%, $p=0.039$). As shown in Table 1, deficient patients had significantly higher median PTH (325 vs. 199 pg/mL, $p=0.016$), higher calcium (2.82 vs. 2.76 mmol/L, $p=0.025$), and lower phosphate (0.67 vs. 0.78 mmol/L, $p=0.043$).

Conclusion: Vitamin D deficiency is associated with a more biochemically active PHPT phenotype and a strong association with single-gland adenomatous disease. These findings challenge the traditional assumption that Vitamin D deficiency predisposes to multiglandular hyperplasia and support routine preoperative screening and repletion.

CO-313: IMPACT OF SURGERY FOR NASAL POLYPOSIS ON QUALITY OF LIFE: EVALUATION WITH SNOT-22

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Introduction: Nasal polyposis is a chronic inflammatory disease of the upper airways that can cause persistent nasal obstruction, olfactory dysfunction, and other symptoms that substantially impair patients' quality of life. Although medical therapy remains the cornerstone of management, endoscopic sinus surgery is indicated in patients with persistent or refractory symptoms. To evaluate the outcomes of endoscopic sinus surgery in patients with nasal polyposis using the SNOT-22 questionnaire.

Methods: We conducted a retrospective descriptive study including 12 patients who underwent surgery for nasal polyposis

between 2021 and 2024.

Results: The mean age was 46 years, with a sex ratio of 1:1. Asthma was present in 9 cases. Widal syndrome was observed in 3 patients, and four patients had previous nasal polypectomy. The main presenting symptoms were nasal obstruction (11 patients) and olfactory disorders (10 patients), while purulent nasal discharge and otologic symptoms occurred in 4/12 cases. All patients had previously received nasal corticosteroid therapy, often associated with multiple courses of systemic corticosteroids, without significant improvement.

Preoperative SNOT-22 scores averaged 65.6, with all patients reporting impaired sleep quality. Nasal endoscopy confirmed polyposis, staged III–IV in 11 cases. CT scans were performed to assess lesion extension and identify anatomical variants increasing surgical risk.

All patients underwent endoscopic sinus surgery: polypectomy alone in 3 patients, bilateral ethmoidectomy with middle meatal antrostomy and sphenoidotomy in 6, and additional turbinate procedures in 3. Postoperatively, all received antibiotics and 7 patients also received intravenous corticosteroids. Histopathology confirmed nasal polyposis in all cases.

Postoperative SNOT-22 scores decreased to 16, reflecting a 75% improvement.

Conclusion: Endoscopic sinus surgery provides significant symptomatic and quality-of-life improvement in patients with nasal polyposis unresponsive to medical therapy.

CO-314: PREDICTORS OF SYMPTOMATIC PRIMARY HYPERPARATHYROIDISM: A RETROSPECTIVE ANALYTICAL STUDY

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Introduction: Primary hyperparathyroidism (PHPT) has a heterogeneous clinical spectrum, ranging from asymptomatic biochemical abnormalities to overt skeletal and renal complications. Identifying factors associated with symptomatic disease may improve risk stratification and guide clinical management. This study aimed to identify independent factors associated with symptomatic PHPT and to evaluate the predictive value of preoperative biochemical markers.

Methods: We conducted a retrospective analytical study including 67 patients who underwent surgery for PHPT between 2015 and 2024. Factors associated with symptomatic disease were assessed by univariate analysis, followed by binary logistic regression to identify independent predictors. Receiver operating characteristic (ROC) analysis was used to evaluate the predictive performance of preoperative parathyroid hormone (PTH) levels.

Results: Clinical manifestations were present in 43 patients (64.2%). Median diagnostic delay was significantly longer in symptomatic patients (14 vs. 7 months; $p < 0.001$). Corrected serum calcium was significantly higher in patients with more severe clinical presentations (mean, 2.94 mmol/L; $p = 0.025$). Mean preoperative PTH was 512 pg/mL in symptomatic patients versus 205 pg/mL in milder forms ($p = 0.001$). A PTH threshold of 275.5 pg/mL predicted symptomatic disease with 81% sensitivity and 62% specificity. On multivariable analysis, diagnostic delay (OR=1.102; 95% CI, 1.021–1.185; $p = 0.015$) and preoperative PTH level (OR=1.005; 95% CI, 1.001–1.010; $p = 0.042$) remained independently associated with symptomatic disease.

Conclusion: Longer diagnostic delay and higher preoperative

PTH levels were independently associated with symptomatic PHPT. These findings support timely diagnosis and suggest that PTH may help identify patients at increased risk of clinically overt disease.

CO-315: SKELETAL INVOLVEMENT IN PRIMARY HYPERPARATHYROIDISM: CLINICAL AND DENSITOMETRIC FEATURES

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Introduction: Primary hyperparathyroidism (PHPT) is associated with increased bone turnover and reduced bone mineral density (BMD), potentially resulting in significant skeletal morbidity that may remain clinically silent despite substantial densitometric impairment. This study aimed to evaluate the clinical, biochemical, radiological, and densitometric features of skeletal involvement in patients surgically treated for PHPT.

Methods: We conducted a retrospective analytical study including 67 patients who underwent surgery for PHPT between 2015 and 2024. Clinical manifestations, biochemical parameters, radiographic findings, and dual-energy X-ray absorptiometry (DXA) data were analyzed.

Results: Bone pain was reported in 35.8% of patients, arthralgia in 32.8%, and a history of pathological fractures in 13.4%. Mean alkaline phosphatase level was 120 IU/L. Standard radiographs identified skeletal abnormalities, including diffuse bone demineralization and vertebral compression fractures, in a subset of patients. DXA revealed impaired BMD in 94% of evaluated patients. The radius was particularly affected, with a mean T-score of -3.1 , indicating marked cortical bone loss.

Conclusion: Skeletal involvement was highly prevalent in patients with PHPT, with densitometric abnormalities occurring more frequently than overt clinical manifestations. These findings highlight the value of systematic DXA assessment for detecting skeletal involvement, evaluating disease severity, and guiding management in PHPT.

CO-316: HEAD AND NECK INVOLVEMENT IN SYSTEMIC SARCOIDOSIS: CLINICAL FEATURES AND DIAGNOSTIC CHALLENGES

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Introduction: Head and neck involvement in systemic sarcoidosis is uncommon and clinically heterogeneous, with manifestations that may mimic common otolaryngological disorders and complicate diagnosis. This study aimed to characterize the clinical spectrum and diagnostic features of head and neck involvement in patients with systemic sarcoidosis.

Methods: We conducted a retrospective descriptive and analytical study of 86 adults with systemic sarcoidosis managed at Internal Medicine Department of Farhat Hached University Hospital, from 2009 to 2025. Head and neck involvement was assessed through clinical presentation, otolaryngological examination, imaging findings, and histopathological data.

Results: Otolaryngological symptoms were reported in 13/86 patients (15.1%). Nasal obstruction was the most frequent symptom (6/13; 46.2%), followed by dysphagia/odynophagia (5/13; 38.5%) and dysphonia (3/13; 23.1%). Dysosmia, tinnitus, and vertigo were each reported in 2/13 patients (15.4%), whereas epistaxis, hyperacusis, facial asymmetry, and laryngeal dyspnea each occurred in 1/13 (7.7%). Specialized otolaryngological examination was performed in 15 patients and was normal in 9/15 (60.0%). Among the six patients with objective abnormalities, sinonasal involvement predominated (3/6; 50.0%), followed by neurosensory involvement (2/6; 33.3%), including peripheral facial palsy and bilateral sensorineural hearing loss, and laryngeal involvement (1/6; 16.7%). Laryngeal biopsy confirmed non-caseating epithelioid and giant-cell granulomas in one patient.

Conclusion: Otolaryngological manifestations occurred in 15.1% of patients with systemic sarcoidosis and showed marked anatomical and clinical heterogeneity. Sinonasal disease was the predominant objective manifestation, while laryngeal, auditory, and facial nerve involvement were less frequent. The high proportion of normal specialized examinations despite reported symptoms underscores the diagnostic challenge and supports targeted otolaryngological assessment.

CO-317: POST-INTUBATION LARYNGO-TRACHEAL STENOSIS: CLINICAL CHARACTERISTICS AND ENT MANAGEMENT

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Introduction: Upper airway dyspnea is a common and potentially serious symptom. In patients with a history of tracheal intubation during an ICU stay, post-intubation complications should be considered first in the diagnostic process.

Methods: We conducted a descriptive retrospective study over a 22-year period, including 33 cases of acquired laryngotracheal stenosis managed in the ENT-Head and Neck Surgery Department at Fattouma Bourguiba University Hospital, Monastir.

Results: The mean age was 26 years, with a sex ratio of 2. Common comorbidities included cardiovascular disease, chronic respiratory conditions, and neurological or psychiatric disorders. Smoking was a major associated risk factor. Intubation was primarily indicated for trauma (48%), followed by brain injury (15%) and acute poisoning (15%). The average intubation duration was 13 days, with 79% of patients intubated for more than 7 days, which is considered a high-risk factor for stenosis. The mean interval between extubation and symptom onset was 38 days.

All patients presented with dyspnea (100%), associated with dysphonia (n = 13), stridor (n = 6), and cough (n = 2). Cervicothoracic CT revealed a laryngotracheal lumen narrowing of over 70% in more than half the cases. The mean stenosis length was 18 mm. All patients underwent upper airway endoscopy under general anesthesia to evaluate the location, type, and characteristics of the stenosis: 55% were inflammatory, 14% fibrotic, and 28% mixed.

All patients received intravenous corticosteroids. Endoscopic first-line treatment was performed in 29 cases, with a success rate of 78%.

Conclusion: These findings underscore the importance of early tracheostomy in intubated patients to prevent complications

from prolonged endotracheal intubation.

PÉDAGOGIE

CO-318: ENGAGING YOUNG ADULTS IN BLOOD DONATION THROUGH AN EDUCATIONAL VIDEO

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Introduction: Maintaining an adequate blood supply remains a challenge for transfusion services, making the recruitment of young and potentially long-term donors particularly important. Young adults may have limited knowledge of blood donation and may be influenced by misconceptions, perceived barriers and lack of information. Educational interventions using accessible audiovisual formats may provide an engaging approach to addressing these gaps and fostering positive attitudes toward donation. This study aimed to assess the impact of an educational video on young adults' knowledge, attitudes and intention to donate blood and to identify perceived barriers to donation.

Methods: We conducted a quasi-experimental before-and-after study among young adults, primarily recruited at the Higher Institute of Nursing Sciences of Tunis, with additional recruitment via digital platforms and social media. Participants completed a structured questionnaire assessing knowledge, attitudes, perceived barriers and intention to donate before and after viewing an educational video. The video covered eligibility, the donation process, safety and common misconceptions. Its script was scientifically developed and validated, while editing and visual content were produced with InVideo AI assistance. Pre- and post-intervention responses were compared.

Results: A total of 277 young adults participated; 67.9% were female, with a median age of 21 years. Before the intervention, important knowledge gaps were identified regarding blood donation eligibility criteria, pre-donation screening and contraindications, highlighting the need for targeted educational approaches. Following the intervention, knowledge and attitudes improved significantly across all assessed domains ($p < 0.05$). The intention to donate blood reached 91.7%, while 85.9% of participants intended to encourage relatives to donate. Lack of information was the most frequently reported barrier to donation. These findings suggest that a brief, accessible audiovisual intervention can address key informational gaps while positively influencing young adults' perceptions and willingness to engage in blood donation.

Conclusion: The educational video was associated with significant improvements in knowledge, attitudes and intention to donate among young adults. Beyond transmitting information, the intervention may help make blood donation more understandable and approachable for a younger audience. Integrating concise audiovisual educational tools into social media and institutional awareness campaigns could complement traditional donor education, address perceived barriers and support the recruitment of future blood donors. Such approaches may be particularly relevant in engaging young adults early and encouraging sustained participation in blood donation.

CO-319: DIGITALIZING COMPETENCY-BASED TRAINING IN CELL THERAPY: AN INTERACTIVE PORTFOLIO FOR PHARMACY RESIDE

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Introduction: Competency-based medical education emphasizes structured learning, continuous assessment, feedback and learner autonomy. In highly specialized fields such as cell therapy, pharmacy residents must integrate theoretical knowledge, technical skills and professional competencies while documenting their progressive development. However, competency acquisition may be dispersed across training activities and difficult to monitor longitudinally. We aimed to develop a digital portfolio for residents in industrial and hospital pharmacy specializing in applied pharmacology and cell therapy, to structure competency development, support longitudinal monitoring, facilitate formative feedback and reflective learning and promote learner autonomy.

Methods: An educational development approach was used to design a portfolio with Google Sites for pharmacy residents in the Cell Therapy Unit of the National Blood Transfusion Center. The portfolio was structured around three competency domains: knowledge (theoretical concepts), skills (technical procedures and management of hematopoietic stem cell grafts) and professional attitudes (professional conduct and interdisciplinary collaboration). Learning activities and competency evidence were organized within each domain for progressive documentation and validation. Digital badges recognized acquired competencies, while Google Analytics monitored activity and engagement. It supports resident self-monitoring, supervisor review and feedback.

Results: The developed portfolio provides a centralized, interactive learning environment integrating educational resources, learning activities, competency documentation, evidence of learning, digital recognition and engagement monitoring. Its domain-based structure makes the expected learning dimensions explicit and enables residents to progressively record training activities and associated evidence as learning advances. Competency evidence is linked to the corresponding domain, creating a more structured record of development that can be reviewed longitudinally. For supervisors, the portfolio provides a consolidated view of documented learning and competency progression, supporting review and formative feedback rather than relying solely on informal or fragmented documentation. Digital badges add a visible recognition mechanism for acquired competencies and may reinforce learners' awareness of progression, while Google Analytics provides objective information on platform activity and engagement patterns. By bringing learning resources, evidence, competency tracking, recognition, self-monitoring and supervisor feedback into one digital environment, the portfolio operationalizes key principles of competency-based education within specialized cell therapy training. The developed tool therefore establishes a practical educational framework that can subsequently be evaluated for usability, engagement and educational impact.

Conclusion: This digital portfolio offers a structured and potentially reproducible approach to competency-based pharmacy education in cell therapy. By integrating learning resources, progressive competency documentation, evidence of learning, digital recognition, learner self-monitoring,

supervisor review and engagement monitoring, it addresses key educational needs of specialized training. The approach may strengthen longitudinal tracking, formative feedback, reflective learning and learner autonomy while providing educators with a clearer view of competency development.

CO-320: FROM SIMULATION TO WORKPLACE-BASED ASSESSMENT: IMPACT OF A SEQUENTIAL SIMULATED MINI-CEX ON UNDERGRA

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Introduction: The Mini-Clinical Evaluation Exercise (Mini-CEX) is a widely used workplace-based assessment supporting competency-based medical education through direct observation and feedback. However, whether prior simulation-based Mini-CEX training enhances subsequent performance in authentic clinical settings remains unclear. This multicenter pilot study evaluated the feasibility, acceptability, and preliminary educational impact of a sequential simulated and workplace-based Mini-CEX in undergraduate anesthesiology.

Methods: We conducted a prospective multicenter quasi-experimental study in three university anesthesiology departments in Tunis, Tunisia. Eighteen fifth-year medical students completed a standardized simulated Mini-CEX followed two weeks later by a workplace-based Mini-CEX during an authentic pre-anesthetic consultation. Faculty assessed performance using a seven-domain, nine-point Mini-CEX scale and provided structured feedback after each assessment. The primary outcome was the change in overall Mini-CEX score. Secondary outcomes included domain-specific performance, inter-rater reliability, and learner satisfaction.

Results: Overall Mini-CEX scores increased significantly from a median of 5.53 during the simulated encounter to 7.62 during the workplace-based encounter ($p=0.014$). Significant improvements were observed in clinical reasoning ($p=0.005$), patient communication ($p=0.006$), organization and efficiency ($p=0.021$), and global rating ($p=0.026$). Fourteen students (77.8%) improved their overall score (Figure 1). Inter-rater reliability was excellent (ICC=0.937; 95% CI, 0.823–0.978). Learner satisfaction was high, with 72.2% reporting a positive educational experience, and faculty supported the Mini-CEX as a formative assessment strategy.

Conclusion: This pilot study suggests that a sequential simulated and workplace-based Mini-CEX is feasible and associated with improved clinical performance, particularly in clinical reasoning and communication, supporting integration of simulation with workplace-based assessment.

CO-321: CONCEPT-MAP INTEGRATION IN CASE-BASED LEARNING: A THREE-ARM PILOT RANDOMIZED TRIAL

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Introduction: Case-based learning (CBL) supports contextualized learning and clinical reasoning, but the volume of information generated during case analysis can overwhelm novice learners. Concept maps may serve as a cognitive scaffold, yet the optimal mode of integration, teacher-constructed versus collaboratively-constructed, remains poorly characterized. Drawing on the Interactive–Constructive–Active–Passive (ICAP) framework and cognitive load theory, we hypothesized that the mode of integration, rather than the concept map per se, would differentially shape acquisition, clinical reasoning, and retention.

Methods: We conducted a three-arm pilot randomized trial in third-year medical students of the second cycle of medical studies, during their obstetrics and gynaecology clerkship. Thirty students who had read the pre-eclampsia module from the official faculty teaching materials were randomized to: standard CBL without a concept map (active mode); CBL with a teacher-constructed map presented after the case (constructive mode); or CBL with a map co-constructed with the students (interactive mode). The same case, instructor, and objectives were used. Knowledge was assessed by a six-item questionnaire before, immediately after, and two weeks after the session; clinical reasoning by a structured synthesis question. Grading was blinded; Cohen's d and parti

Results: Twenty-six students completed all assessments. The arms were comparable at baseline ($p=0.154$). Immediate knowledge gain was largest in the interactive arm ($p=0.045$; $\eta^2p=0.24$). Clinical-reasoning scores were higher in both concept-map arms than in standard CBL ($p=0.007$; $\eta^2p=0.35$). At two weeks, the interactive arm showed superior retention ($p=0.006$; $\eta^2p=0.36$) and was the only group with a positive trajectory ($p=0.047$).

Conclusion: The mode of concept-map integration had a differential, theoretically interpretable effect: teacher-constructed maps optimized immediate reasoning, whereas collaboratively-constructed maps maximized retention. These preliminary findings support adapting the mode of integration to the learning objective; a confirmatory multicentre trial is warranted.

CO-322: TRIVIAL CHEM: A DIGITAL GAME DESIGNED TO BOOST ENGAGEMENT IN PHARMACY CHEMISTRY TUTORIALS

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Introduction: Game-based learning is increasingly recognized as an effective strategy to enhance student motivation and engagement, particularly in scientific disciplines often perceived as abstract. Analytical chemistry tutorials, traditionally based on collective exercise correction, offer limited interactivity. This study aimed to design, implement, and evaluate a digital serious game to transform conventional tutorial sessions into an interactive learning experience for pharmacy students.

Methods: "Trivial Chem," a web application built on a client-server architecture (React.js, Node.js/Express.js, Socket.io, SQLite), was designed by an interdisciplinary team and tested during a pilot session on aqueous acid-base titrations with 29 second-year pharmacy students divided into sub-groups. Pedagogical impact was assessed through teacher observation, a pre-/post-test, and an anonymous satisfaction survey.

Results: The game alternates timed questions between two formats: "Expert Calculation" (application/analysis-level, 180s) and "Flash Answer" (memorization/comprehension-level, 60s), inspired by Trivial Pursuit. Advancement rules reward speed and accuracy: the first correct answer earns a colored triangle, while a group stopping the timer can gain two triangles if correct or lose one if incorrect, with remaining triangles reallocated to competitors. Direct teacher observation showed technical feasibility and sustained engagement, though decision-making was centralized around the smartphone holder. Mann-Whitney analysis showed a significant score improvement from pre-test (3.74 ± 0.81) to post-test (4.31 ± 0.66) ($p=0.006$), with full-mark students rising from 3 to 12. Among 24 survey respondents, 18 rated their experience 4-5/5, 23/24 found the interface easy to use, and 23/24 found the game more engaging than traditional sessions.

Conclusion: Trivial Chem improved engagement, collaborative dynamics, and short-term learning, showing potential for broader disciplinary adoption.

CO-323: ESSPEC GAME: AN EDUCATIONAL ESCAPE GAME FOR TEACHING PHARMACEUTICAL ANALYTICAL QUALITY CONTROL

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Introduction: Active learning strategies are increasingly used in pharmaceutical education to promote student engagement, autonomy, and higher-order reasoning. In this context, ESSpec Game was developed as an educational escape game integrated into analytical chemistry practical sessions.

Aim: To design, implement, and evaluate an educational escape game applied to atomic absorption spectrometry for pharmaceutical quality control.

Methods: ESSpec Game was structured around eight sequential puzzles reproducing the analytical workflow for potassium determination in injectable potassium chloride by

atomic absorption spectrometry. The 90-minute activity was implemented during third-year pharmacy practical sessions. Evaluation combined direct observation, teacher feedback, student satisfaction questionnaires, and analysis of student reports.

Results: Thirteen teachers and 138 students participated in the evaluation. Pedagogical relevance was rated 4.46/5 by teachers, with 92.3% assigning a score of 4 or 5. Among students, 91.6% supported repeating the activity, 85.5% considered the difficulty appropriate, and 62.7% reported enjoying the session. Teamwork, scientific reasoning, time management, critical thinking, and decision-making were the most frequently reported skills. All groups correctly performed calibration and concentration calculations, although 11% showed inaccuracies in the regulatory justification of the final decision.

Conclusion: ESspec Game was well accepted and promoted active, collaborative, and decision-oriented learning. It appears best suited as a complement to conventional practical sessions rather than a replacement.

CO-324: THE ROLE OF VIRTUAL REALITY IN LAPAROSCOPIC CHOLECYSTECTOMY LEARNING: A SYSTEMATIC REVIEW OF RCT

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Introduction: Minimally invasive surgery requires specific psychomotor skills that are difficult to acquire using the traditional patient-based learning paradigm. Virtual reality (VR) simulation has emerged as a promising teaching method. The objective of this systematic review was to evaluate the impact of VR simulation on surgical performance during laparoscopic cholecystectomy (LC) training.

Methods: This systematic review was conducted according to the PRISMA 2020 guidelines. A search was performed on June 1, 2026, in PubMed/MEDLINE, the Cochrane Library, Google Scholar, and the National Library of Medicine, covering the period from January 1, 2002, to June 1, 2026, supplemented by the main clinical trial registries. Randomized controlled trials evaluating VR simulation training in open surgery for medical students, interns, residents, or junior surgeons were included, versus conventional training, a box trainer, or no training. The primary outcome was surgical performance (OSATS, GOALS, specific scores); secondary outcomes included operative time, technical errors, transfer of skills to the operating room, and retention of skills. Th

Results: Of 2920 identified references, 21 randomized controlled trials were included, totaling approximately 814 participants, published between 2002 and 2025. Nineteen of the 21 studies (95%) reported a significant benefit of VR training on at least one technical performance criterion. A transfer of skills to the operating room, demonstrated or partial, was observed in 15 of the 21 studies (71%). VR was generally found to be equivalent to, rather than superior to, alternative physical modalities (box trainer, cadaver). The retention of skills at a distance remained poorly documented (2 of the 21 studies). The risk of bias was low in 76% of the studies, with no studies classified as high risk.

Conclusion: Virtual reality simulation improves the acquisition of technical skills in laparoscopic cholecystectomy and, in the majority of studies that have evaluated it, allows for significant transfer to actual surgical practice, with an effectiveness

equivalent to that of alternative physical simulation modalities. The evaluation of long-term retention and the standardization of outcome measures remain the main research priorities to be consolidated before formulating definitive practice recommendations.

CO-325: FLIPPED CLASSROOM IN NURSING EDUCATION: A CROSS-SECTIONAL STUDY OF STUDENT SATISFACTION AND ACCEPTAB

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Introduction: Traditional lecture-based teaching in nursing education shows limits in fostering active student engagement and knowledge retention. The flipped classroom model, which shifts theoretical learning to home study and reserves class time for active application through discussions, case studies, and group work, has emerged as a promising alternative but its effectiveness depends on content quality, pedagogical support, and student readiness. This study aimed to assess the satisfaction of nursing students with flipped-classroom teaching, exploring their experience, expectations, and overall perception, with particular attention to engagement, comprehension, and motivation.

Methods: A cross-sectional descriptive study was conducted among third-year nursing students at the Higher Institute of Nursing Sciences of Le Kef, Tunisia, during the first semester of 2024–2025. Course materials were provided 10 days before two 2-hour sessions using MCQs, short-answer questions, and clinical cases. Data were collected using a literature-based, instructor-validated self-administered questionnaire covering five domains. Responses on a 5-point Likert scale were grouped into three categories to facilitate analysis: not satisfied, neutral, and satisfied.

Results: we included 76 learners. Two-thirds of participants reported being satisfied with module content. Course structure and content were rated satisfactory by 52.6% and 57% of students respectively. Learning acquisition was perceived as facilitated by 63.2% of respondents, and 71% were satisfied with proposed activities, notably clinical-case discussions (rated relevant by 73%). However, 42.1% found the workload poorly adapted, and only 38.1% felt adequately guided toward a suitable working method, despite 64.5% reporting a sense of autonomy in time management. Peer and tutor discussion tools were a weak point, with over 60% expressing dissatisfaction with peer interaction, though tutor interaction was rated positively (69.7% of learners were satisfied). Technical and environmental aspects were generally well rated (>75% satisfaction with materials). Over 70% felt the flipped classroom met their expectations, reporting improved performance (73%) and faster task completion (63%). More than half (52.7%) recommended extending the method to other modules, and 35% believed it could fully replace traditional teaching.

Conclusion: The flipped classroom was associated with a generally positive level of student satisfaction, particularly

regarding its flexibility and the more interactive, collaborative classroom dynamic. Nevertheless, challenges remain regarding workload management, guidance toward appropriate learning **Methods**, and digital collaboration tools. Structured faculty and student training, equitable access to digital resources, and continuous evaluation are recommended to optimize implementation and support broader adoption of this pedagogical approach.

CO-326: "COPD CHALLENGE": A CARD-BASED GAMIFICATION APPROACH TO TEACHING THE MANAGEMENT OF ACUTE EXACERBATIO

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Introduction: Teaching the management of acute exacerbations of chronic obstructive pulmonary disease (AECOPD) requires learners to integrate clinical reasoning and therapeutic decision-making. Gamification may provide an interactive alternative to conventional teaching **Methods.** the aim of this study was to assess the impact of an educational card game on learners knowledge of AECOPD, as well as their satisfaction with this tool.

Methods: A prospective study included nurses, assigned to different departments, who volunteered for educational session. We developed an educational card game (COPD Challenge) focused on AECOPD (definition/risk factors, clinical features, and management). Participants were divided into four groups and received sets of cards containing correct answers, incorrect options, and plausible distractors. Through successive rounds, groups selected cards, justified their answers and discussed their clinical reasoning. Each round was followed by a structured debriefing. Pre- and post-test questionnaires were used to assess learners' knowledge and satisfaction.

Results: Thirteen nurses were included in the study, with a mean age of 32±8 years and a gender ratio of 0,3. There was a significant improvement in knowledge about AECOPD after the session with a median score that increased from 11 [8,14] to 14 [14,17] with $p<10^{-3}$ (Figure 1).

All learners felt that this training was very constructive as well as it improved their knowledge and 12 thought that it would have a positive impact on their future practices. In addition, 12 were quite satisfied overall.

Conclusion: "BPCO Challenge" is a simple, low-cost, and easily reproducible game-based educational tool which effectively contributed to significant knowledge improvement with satisfaction felt by most learners.

CO-327: COMPARATIVE ANALYSIS OF IMITATION VS. IMMERSION PEDAGOGIES IN INTENSIVE CARE NURSING EDUCATION

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Introduction: Clinical training in high-intensity environments

like Intensive Care Units (ICUs) requires an optimal pedagogical balance between theory and practice to ensure patient safety and reduce learner stress. Clinical tutors face a persistent dilemma between experiential immersion and guided imitation. This study aimed to compare the effectiveness of the "imitation method" (guided observation and reproduction) versus the "immersion method" (direct experiential learning) on the acquisition of five core clinical procedural skills among novice learners in an ICU.

Methods: A prospective observational study was conducted from November 2024 to April 2025 at the ICU of Houcine Bouzaïène Hospital in Gafsa, involving 60 first-year health technology learners from the Higher School of Health Sciences and Techniques of Gafsa. Participants were randomly allocated to either the imitation arm ($n = 30$) or the immersion arm ($n = 30$)⁷. The clinical tutor evaluated five procedural skills (occupied bed making, facial care, subcutaneous injection, aseptic dressing change, and waste management) using a standardized competency scale (beginner, in progress, autonomous).

Results: The imitation group achieved significantly superior autonomy rates across all five techniques compared to the immersion group. For occupied bed making, 40% ($n = 12$) of the imitation group achieved autonomy compared to 0% ($n = 0$) in the immersion group, where 50% ($n = 15$) remained beginners. Autonomy rates in facial care were 90% ($n = 27$) for the imitation arm versus 50% ($n = 15$) for the immersion arm. Complete autonomy (100%, $n = 30$) was reached by the imitation group in subcutaneous injection and waste management, compared to 80% ($n = 24$) in the immersion group. For aseptic dressing changes, 60% ($n = 18$) of the imitation group became autonomous, whereas 20% ($n = 6$) of the immersion group remained beginners and only 10% ($n = 3$) achieved autonomy.

Conclusion: For novice learners, structured imitation under the direct guidance of a clinical tutor is significantly more effective than unstructured clinical immersion for mastering protocolized technical skills in an ICU environment. Rather than relying on simple immersion, clinical training programs should adopt a hybrid model combining guided observation, simulation-based training, and reflective feedback to optimize competence and safeguard patient care.

CO-328: SIMULATION-BASED ASSESSMENT OF TRANSFUSION SAFETY AND MANAGEMENT OF AN ACUTE TRANSFUSION REACTION

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Introduction: Acute transfusion reactions are potentially life-threatening events requiring prompt recognition and immediate management. Simulation-based education may reveal cognitive and practical gaps in transfusion safety. We evaluated a simulation session designed to assess and improve healthcare professionals' knowledge and clinical responses to an acute transfusion reaction.

Methods: A simulation workshop was conducted among seven healthcare professionals (midwives and paramedical staff) at the Jendouba School of Nursing. The scenario involved a 32-year-old postpartum woman receiving a red blood cell unit who developed chills and hyperthermia consistent with a febrile non-hemolytic transfusion reaction. Participants were

required to recognize the event, immediately stop transfusion, maintain intravenous access, verify patient identity and bedside compatibility testing, alert the physician, and initiate appropriate monitoring and management. A structured debriefing was performed followed by a five-item pre/post-test assessing transfusion safety knowledge.

Results: During simulation, the two midwives initially failed to stop the transfusion despite clinical signs of an acute reaction, highlighting a critical gap in the immediate recognition and management of The debriefing identified difficulties in performing and interpreting the bedside compatibility test and in applying the emergency management algorithm. The debriefing also revealed technical and organizational barriers, including limited availability of reagents and appropriate equipment. The pre/post-test analysis showed improvement in several key responses. Recognition of the need to immediately stop transfusion increased from 85.7% to 100%. Recognition of bedside compatibility testing increased from 14.3% to 100% while selection of the appropriate reagents increased from 42.9% to 71.4%. Regarding transfusion incident reporting, recognition of the obligation of reporting transfusion reactions increased from 57.1% to 85.7%. A visual educational poster of bedside compatibility testing was subsequently developed and displayed in several hospital departments.

Conclusion: Simulation-based education identified important cognitive and practical gaps in transfusion safety while promoting experiential learning. Repeated simulation, structured debriefing and visual educational tools may strengthen transfusion practices and improve patient safety.

PÉDIATRIE

CO-329: FACTORS ASSOCIATED WITH FAILED TRANSITION TO ADULT CARE IN YOUNG ADULTS WITH TYPE 1 DIABETES: RESULT

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Introduction: The transition of adolescents and young adults with type 1 diabetes (T1D) from pediatric to adult care is a critical stage associated with challenges in autonomy and adherence to care. Its success depends on both medical and psychosocial factors.

Aim : To identify factors associated with unsuccessful transition to adult care within a structured transition program implemented at a Tunisian university hospital.

Methods: This prospective interventional study was conducted in 2022 at the pediatric department of Farhat Hached University Hospital in Sousse, Tunisia. Adolescents and young adults with T1D receiving pediatric follow-up were enrolled. The transition program included a joint consultation involving both the pediatrician and the adult endocrinologist, supplemented by small-group educational sessions. Transfer to adult endocrinology care occurred after a 3-month transition period. Clinical and biological parameters were assessed, and symptoms of anxiety and depression were evaluated using the Hospital Anxiety and Depression Scale (HADS) before and after the intervention.

Results: Of the 39 eligible patients contacted, 34 agreed to participate. Mean age was 21.9 ± 4.1 years, with a mean diabetes duration of 14.6 ± 4.7 years. Mean baseline HbA1c was $9.5 \pm 1.6\%$.

At 3 months, 24 patients (70.6%) attended their first adult endocrinology appointment, indicating a successful transition. Patients who failed transition had significantly higher anxiety scores than those who successfully transferred (12.4 ± 6.0 vs. 5.9 ± 4.4 ; $p = 0.024$). Depression scores were also higher in the unsuccessful transition group (12.3 ± 6.1 vs. 6.3 ± 4.9), although the difference did not reach statistical significance ($p = 0.077$). Anxiety emerged as the main factor associated with transition failure.

Conclusion: A structured transition program was associated with satisfactory engagement in adult care. Anxiety was the main factor associated with transition failure, highlighting the need for early psychological screening and support during the transition process.

CO-330: FACTORS ASSOCIATED WITH THE SEVERITY OF HYPOXIC-ISCHEMIC ENCEPHALOPATHY IN TERM NEWBORN

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Introduction: The severity of hypoxic-ischemic encephalopathy (HIE) is an important determinant of neonatal outcome. Early identification of factors associated with severe neurological injury may help improve perinatal management. This study aimed to identify maternal, obstetric and neonatal factors associated with HIE severity in term newborns.

Methods: We performed a retrospective multicenter study involving six Tunisian university neonatal intensive care units over a 12-month period from January to December 2020. Term newborns diagnosed with perinatal asphyxia were included. Maternal, obstetric and neonatal characteristics, resuscitation parameters and neurological findings were collected. HIE severity was classified according to the Sarnat staging system. Associations between clinical characteristics and HIE severity were analyzed using appropriate statistical tests, with statistical significance defined as $p < 0.05$.

Results: Among the 183 included newborns, 110 (60.1%) had stage I HIE, 48 (26.2%) had stage II, and 25 (13.7%) had stage III HIE. No significant association was found between maternal or neonatal characteristics and HIE severity. However, the presence of stained or meconium-stained amniotic fluid was significantly associated with HIE severity ($p = 0.041$). Lower Apgar scores at 1, 5 and 10 minutes were associated with more severe HIE. Furthermore, a longer duration of delivery-room resuscitation was significantly associated with greater HIE severity ($p < 0.001$).

Conclusion: In this multicenter Tunisian cohort, lower Apgar scores, abnormal amniotic fluid characteristics and prolonged delivery-room resuscitation were associated with more severe HIE. These findings highlight the importance of effective intrapartum monitoring and timely neonatal resuscitation in reducing the severity of hypoxic-ischemic brain injury.

CO-331: EVOLUTIONARY ASPECTS OF GUILLAIN-BARRÉ SYNDROME IN CHILDREN: FACTORS LINKED TO SEVERITY AND SEQUELAE

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Introduction: Guillain-Barré syndrome (GBS) is a rare acute inflammatory polyradiculoneuritis in children that can be life-threatening and affect functional prognosis. The objective was to identify the clinical, paraclinical, and prognostic factors associated with the severity of the acute phase and the occurrence of sequelae in children with GBS.

Methods: This was a retrospective multicenter study of 60 patients hospitalized for GBS between January 2009 and December 2025 in the pediatric medicine departments A, D, and B, and the intensive care unit of the Tunis Children's Hospital, with one-year follow-up.

Results: The hospitalization rate was 0.07%. The mean age of the patients was 55.6 ± 40.3 months, with a male-to-female ratio of 1.06. The main presenting symptoms were muscle weakness (80%) and gait disturbances (77%). Respiratory involvement was observed in 50% of patients and cranial nerve involvement in 42%. Electromyography predominantly revealed an axonal form of the AMAN type (65%). Intravenous immunoglobulin therapy was administered to 98% of patients. Intensive care was required in 55% of cases and mechanical ventilation in 47%. One death was recorded. After a mean follow-up of 23.5 months, complete recovery was observed in 56% of patients, while motor sequelae persisted in 42%. In multivariate analysis, decreased pulse oxygen saturation and elevated systolic blood pressure were associated with the severity of Guillain-Barré syndrome (GBS). The use of mechanical ventilation (OR = 7.605; 95% CI: [1.137–50.852]; $p = 0.036$) was the main independent factor associated with the occurrence of sequelae.

Conclusion: Decreased pulse oxygen saturation and systolic blood pressure were independently associated with severity in the acute phase, while the use of mechanical ventilation was associated with the occurrence of sequelae. Early identification of signs of severity, particularly respiratory signs, appears essential to optimize management and improve functional prognosis.

CO-332: FACTORS ASSOCIATED WITH BREASTFEEDING MAINTENANCE UP TO SIX MONTHS: A MATERNAL AND CHILD HEALTH CENT

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Introduction: Exclusive breastfeeding until six months of age is essential for child health and development, with additional benefits for mothers. However, its practice remains insufficient worldwide, particularly in Tunisia. The objective was to identify

factors associated with maintaining breastfeeding until six months among mothers attending maternal and child health centers.

Methods: A cross-sectional knowledge, attitudes and practices study was conducted using a hetero-administered questionnaire among mothers of children attending the Mellassine, Manouba, and Ezzouhour maternal and child health centers.

Results: Eighty mothers were included, with a 100% participation rate. Breastfeeding was initiated in 99% of cases, including 39% exclusively breastfed infants, of whom 50% remained exclusively breastfed until six months. The main reasons for discontinuation were perceived insufficient milk supply (67%) and return to work (39%). Mothers had generally satisfactory knowledge of breastfeeding benefits for children, whereas knowledge of maternal benefits was limited. None correctly identified breastfeeding contraindications. Despite strong family support, no mother had received specialized prenatal breastfeeding education. Professional support was significantly associated with better knowledge of benefits for the child ($p=0.021$), while maternal education level influenced knowledge of maternal benefits ($p=0.042$). Among working mothers, extended maternity leave and workplace refrigerator availability favored breastfeeding continuation. Independent factors negatively associated with breastfeeding maintenance until six months were postpartum maternal hospitalization (OR=0.232; 95% CI [0.054–1.006]; $p=0.049$) and professional activity (OR=0.23; 95% CI [0.087–0.610]; $p=0.003$).

Conclusion: Breastfeeding initiation was high, but exclusive breastfeeding until six months remained insufficient. Strengthening professional support and addressing occupational barriers are essential to improve breastfeeding duration.

CO-333: COW'S MILK PROTEIN ALLERGY: QUALITY OF LIFE AMONG TUNISIAN CHILDREN AND THEIR PARENTS

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Introduction: Cow's milk protein allergy (CMPA) is a common pediatric food allergy requiring a strict elimination diet, which often causes psychological, social, and financial stress for families.

Aim: This study aimed to assess quality of life (QoL) and its associated factors among children with CMPA and their parents in Tunisia.

Methods: This cross-sectional study was conducted from December 2025 to March 2026 at Béchir Hamza Children's Hospital of Tunis. Parents of children aged 0 to 18 years with CMPA completed the validated Food Allergy Quality of Life Questionnaire-Parent Form (FAQLQ-PF), evaluating emotional impact, food anxiety, and social limitations. Relevant clinical and sociodemographic data were also collected and analyzed.

Results: A total of 30 parent-completed questionnaires were included in the analysis. Emotional impact and food anxiety were generally moderate. However, common concerns included wishing for allergy resolution (47%), feeling more vigilant than other parents (37%), introducing new foods (33%), accidental allergen exposure (30%), and dining with unfamiliar people (30%). Social restrictions were low overall, although difficulties with restaurant choices and food variety scored highest in 20% of participants. No statistically significant associations were found between QoL and sociodemographic or clinical variables.

Conclusion: CMPA impacts physical health as well as family and social well-being. Early intervention, continuous medical follow-up, and therapeutic parent education are essential to reduce

caregiver burden and improve daily quality of life for these affected families.

CO-334: GROWING UP BEFORE THEIR TIME: THE CHALLENGE OF PRECOCIOUS PUBERTY IN GIRLS

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Introduction: Precocious puberty (PP) in girls is defined as the onset of secondary sexual characteristics before the age of 8 years. It may compromise adult height, have psychosocial consequences and reveal severe diseases. The aim of this study was to describe the clinical, etiological, therapeutic, and outcome characteristics of girls followed for PP in a Tunisian pediatric department.

Methods: A monocentric retrospective descriptive study over a 10-year period (2017-2026) in the Pediatric Department of Farhat Hached University Hospital, Sousse.

Results: A total of 18 girls were included, ranging in age from 3 months to 8 years at diagnosis (mean age: 3.2 years). The most common presenting sign was bilateral breast development (14 patients), followed by isolated pubic hair development (3 patients). Vaginal bleeding was reported in 4 patients. All patients exhibited accelerated linear growth, with a mean height of +2.42 SDS. Bone age advancement was observed in almost all cases.

Pelvic ultrasonography was unremarkable in most patients but identified a suspicious ovarian mass in one case. Pituitary MRI, performed in 9 patients, was normal except for one stable pituitary adenoma. A GnRH stimulation test was conducted in 9 patients and confirmed activation of the hypothalamic-pituitary-gonadal axis in 5 cases.

Idiopathic central precocious puberty was the predominant etiology, accounting for 13 cases. Other etiologies included a granulosa cell tumor (1 case), McCune-Albright syndrome (2 cases), and isolated premature thelarche (2 cases).

GnRH analogue therapy was initiated in 8/13 patients with CPP and resulted in a favorable clinical response.

Conclusion: Beyond the rarity of organic causes, our findings highlight a growing clinical reality: puberty appears to be starting earlier, warranting further investigation into environmental determinants.

CO-335: THE VOICE OF CHILDREN WITH TYPE 1 DIABETES : WHY CONTINUOUS GLUCOSE MONITORING MATTERS

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Introduction: Continuous glucose monitoring (CGM) has transformed the management of children with type 1 diabetes by providing a less invasive and more effective alternative to conventional glucose monitoring

Methods: A prospective survey was conducted among children with T1D followed at the Pediatric Department of Farhat Hached University Hospital, Sousse, and their parents. The study was carried out between January and June 2026. A structured questionnaire assessed parental knowledge, perceptions, and attitudes toward CGM devices.

Results: Eighty child-parent pairs were included. The children

were aged 2-17 years. Overall, 90% of parents were aware of CGM technology. Healthcare professionals were the main source of information (70%), followed by media and social networks (20%).

Virtually all parents recognized the benefits of CGM, particularly reduced pain from finger-prick testing, remote glucose monitoring, and improved prevention of nocturnal hypoglycemia. All expressed interest in using CGM devices. The principal barrier was cost, with unanimous concern regarding the lack of reimbursement by the Tunisian National Health Insurance Fund (CNAM).

Among the participants, 26 children (32.5%) had previously used CGM devices, one-third continuously and two-thirds intermittently. Half of the devices were obtained abroad, while the remainder were purchased locally. The average monthly cost of CGM use was estimated at 300 Tunisian dinars (TND).

Conclusion: CGM is widely perceived by Tunisian children with T1D and their parents as a transformative technology that improves diabetes management, alleviates the burden of glucose monitoring, and enhances quality of life. National reimbursement policies are urgently needed to ensure equitable access to CGM and allow all children with diabetes to benefit from this standard of modern diabetes care.

CO-336: HYPOXEMIC PNEUMONIA: A PEDIATRIC UNIT EXPERIENCE OF 22 CASES

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Introduction: Hypoxemic pneumonia is associated with high morbidity and mortality, with a poor prognosis. Optimal management in a hospital setting is essential for favorable outcomes. The aim of our study was to evaluate the epidemiological, clinical, and therapeutic characteristics of hypoxemic pneumonia in a general pediatric department

Methods: A retrospective three-year study was conducted, including 22 children with hypoxemic pneumonia. Hypoxemic pneumonia was defined as acute pneumonia associated with hypoxemia, defined by an SpO₂ < 90% on room air. All patients were managed in the Department of Pediatrics B at Béchir Hamza Children's Hospital of Tunis. Data on clinical presentation, laboratory findings, and bacteriological investigations were collected. Patient outcomes were assessed, and the data were analyzed using SPSS software

Results: Twenty-two cases of hypoxemic pneumonia were included, with 12 girls and 10 boys (1.2 ratio). The mean age was 20 months (1 month–8 years). A history of anemia, pneumonia, congenital heart disease, bronchiolitis, or asthma was reported in 8 patients (36%). Clinical presentation included: fever (n=18), dyspnea (n=17), cough (n=16), cyanosis (n=11), fatigue (n=8), gastrointestinal symptoms (n=7), chest pain (n=2), and hemoptysis (n=1). Laboratory findings showed leukocytosis in 45% of cases and leukopenia in 4.5%. Mean CRP level of 114 mg/L. Mean oxygen saturation was 85%. Chest radiography revealed alveolar opacities in 20 patients (90%), pleural involvement in 11 (50%), bullous lesions in 4 (18%), and an interstitial pattern in 3 (13%). A causative pathogen was

identified in 7 cases (32%), including H1N1 (n=2), methicillin-sensitive *Staphylococcus aureus* (n=2), *Haemophilus influenzae* (n=1), *Streptococcus pneumoniae* (n=1), and *Klebsiella pneumoniae* (n=1). Cefotaxime was administered in 19 cases (86%), with vancomycin in 11 cases (50%). Oxacillin was used in 2 cases (9%) and amoxicillin-clavulanic acid in 1 case (4.5%). Oxygen therapy was provided via nasal cannula in 12 patients (54%) and high-flow nasal cannula in 5 (22%). Four patients required mechanical ventilation. Mean hospital stay was 17 days (1–42 days), and mean treatment duration was 14 days. The outcome was favorable in 21 patients (95%). Pneumothorax complicated 5 cases. One patient died from septic shock.

Conclusion: Hypoxemic pneumonia is common, and its management is increasingly standardized despite the frequent lack of microbiological data

CO-337: ANALYSIS OF OFF-LABEL PRESCRIBING PRACTICES IN PEDIATRICS: EXPERIENCE FROM A TUNISIAN HOSPITAL

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Introduction: Off-label prescribing is common in pediatrics because of the limited number of clinical trials conducted in children and the lack of approved therapeutic indications for many medicinal products. Such prescribing may expose patients to a high risk of medication errors.

The aim of this work is to analyze off-label prescriptions in a pediatric ward and identify associated medication-related problems.

Methods: A retrospective descriptive study was conducted over eight months in a pediatric ward. Prescriptions were extracted from the medical records of hospitalized patients and analyzed according to the Summary of Product Characteristics. Prescriptions were considered off-label when they did not comply with authorized conditions of use regarding age, indication, dosage, route, or duration of administration.

Results: A total of 2,821 patients were included, representing 8,463 prescription lines. Eighty-seven prescriptions (1%) were identified as off-label. At least one off-label prescription was found in 29 patients (1%). The main reasons for non-compliance were dosage (63.2%), therapeutic indication (28.7%), and age (26.4%). Antibiotics were the most frequently involved therapeutic class (29%). Scientific justification was identified for 57.4% of off-label prescriptions. Medication-related problems were identified and resolved in 86% of cases.

Conclusion: Off-label prescribing remains a relevant practice in pediatric care in our institution. Although most prescriptions were scientifically justified, their occurrence highlights the importance of strengthening medication-use processes and supporting healthcare teams to improve the quality and safety of care. These findings support pharmacist involvement in prescription review, evidence appraisal, and interdisciplinary decision-making to ensure appropriate, individualized, and safe pharmacotherapy for pediatric patients across pediatric settings.

CO-338: TRAUMA IN CHILDREN MANAGED BY THE EMERGENCY MEDICAL SERVICE

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Introduction: Trauma is the leading cause of death in children beyond the first year of life, and a substantial proportion of deaths occurs at the scene or during transport. Prehospital data from Tunisia remain scarce.

Aim: To describe the epidemiological and clinical profile of children managed for trauma by an emergency medical service (EMS).

Methods: Retrospective descriptive study at EMS 01 (2 January 2022–2 January 2026), including patients aged ≥ 1 month and < 18 years managed for trauma.

Results: We included 256 children (36.7% of 697 paediatric missions), mainly boys (ratio 3.2), mean age 9 ± 5 years (Table 1). Most calls originated outside Greater Tunis, peaking in summer-autumn, on weekdays and by day. Secondary transfers predominated over primary interventions. In primary missions, road traffic accidents were the leading reason for calling; mean GCS was 13 ± 4 . Two patients had anisocoria. Nearly all received venous access and cervical spine immobilization, with intubation in 20.3%, mainly referred to emergency departments (one death). In secondary missions, 37.8% were intubated and ventilated; the most frequent reasons for transfer were further management in an intensive care setting or transfer to or from a surgical department; and most patients were admitted to intensive care or surgery (one death).

Conclusion: Trauma accounts for more than one third of our paediatric activity, with severe injury in six of ten cases and road traffic accidents as the leading cause of primary missions. Road safety remains the main lever for prevention, together with reinforced prehospital pathways for the most severely injured children.

CO-339: UPPER GASTROINTESTINAL BLEEDING IN CHILDREN: CLINICAL FEATURES, MANAGEMENT, AND OUTCOMES

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Introduction: Upper gastrointestinal bleeding (UGIB) is an uncommon but potentially life-threatening condition in children. Hematemesis is one of its main clinical manifestations and may result from various etiologies.

Aim: This study aimed to evaluate the clinical presentation, etiological spectrum, management, and outcomes of pediatric UGIB.

Methods: Children admitted to Pediatric Department B of the Children's Hospital between January 2024 and June 2026 for hematemesis or melena were retrospectively included. Demographic characteristics, clinical manifestations, medication exposure, laboratory parameters, and endoscopic findings were collected and analyzed.

Results: Thirty-five children were included with a mean age of 6.3 years [3 days–14 years]. Hematemesis was reported in 32 patients (91.4%) and isolated melena in 3 (8.6%). Bleeding episodes were predominantly mild. Common associated manifestations included epigastric pain (71.4%) and vomiting (57.1%); organomegaly was noted in three cases. Mean hemoglobin was 11.3 g/dL [9–15]. Upper gastrointestinal endoscopy, performed in 31 patients, revealed *Helicobacter pylori*-associated gastritis (48.6%) and Mallory–Weiss syndrome (22.9%) as the leading etiologies, followed by toxic gastritis (8.6%), NSAID-induced gastritis (5.7%), neonatal esophago-gastro-duodenitis (5.7%), swallowed maternal blood (5.7%), and variceal bleeding (2.9%). All *H. pylori*-positive patients received eradication therapy, with persistent infection documented in 2

of 4 retested patients.

Conclusion: Pediatric UGIB encompasses a diverse etiological profile, predominantly driven by *H. pylori* gastritis and Mallory–Weiss syndrome in our cohort. Upper endoscopy remains essential for establishing an accurate diagnosis and guiding targeted therapeutic management.

CO-340: ACUTE POISONING IN CHILDREN IN THE PREHOSPITAL SETTING

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Introduction: Acute poisoning in children classically contrasts accidental ingestion in toddlers with deliberate self-poisoning in older children. Although hospital series are numerous, the prehospital phase remains poorly described.

Aim: To describe the epidemiological and clinical profile of children managed for acute poisoning by an emergency medical service (EMS).

Methods: Retrospective descriptive study at EMS 01 (2 January 2022–2 January 2026), including patients aged ≥ 1 month and < 18 years managed for acute poisoning.

Results: Among 697 paediatric missions, 95 involved acute poisoning (13.6%), mainly girls (66.3%), median age 15 years [8.5–16] (Table 1). The majority of calls originated from Greater Tunis, mainly by day and on weekdays, peaking in spring-autumn. Eight patients had a relevant medical history, including three with previous suicide attempts and four with depressive or bipolar disorders. A deliberate mechanism was reported in 61.1% of cases. The three most common causative agents were drugs, rodenticides, and carbon monoxide. Primary interventions and secondary transfers were balanced. In primary missions, mean GCS was 13 ± 3.4 ; 27.7% were intubated, mainly referred to emergency department or intensive care. In secondary missions, 52.1% were intubated and ventilated, mainly admitted to intensive care or a hyperbaric oxygen unit. No deaths were recorded, regardless of the type of mission.

Conclusion: Poisoning accounted for nearly 14% of our paediatric activity, with deliberate exposures being particularly observed among adolescent girls and patients with a psychiatric history. Drugs, rodenticides, and carbon monoxide were the leading agents. These findings highlight the importance of safe storage measures and mental health screening among adolescents as key preventive priorities.

CO-341: ACUTE RESPIRATORY DISTRESS IN CHILDREN IN THE PREHOSPITAL SETTING

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Introduction: Acute respiratory disease is the leading reason for emergency care in infants. Its prehospital management determines immediate outcome, yet remains poorly documented in Tunisia.

Aim: To describe the epidemiological and clinical profile of children managed for acute respiratory distress by an emergency medical service (EMS).

Methods: Retrospective descriptive study at EMS 01 (2 January 2022–2 January 2026), including patients aged ≥ 1 month and < 18 years managed for acute respiratory distress during a primary intervention or secondary transfer.

Results: Among 697 paediatric missions, 156 involved acute respiratory distress (22.4%), mainly infants; mean age 2.6 ± 3.5 years, with male predominance (Table 1). Most call originated from Greater Tunis, mainly by day and on weekdays, peaking in spring-winter. Only 29.5% of patients had known underlying medical conditions. Asthma was the most common comorbidity. Bronchiolitis was the leading cause, followed by asthma attack, pneumonia and foreign body aspiration. Secondary transfers predominated over primary interventions. In primary missions, hypoxaemia was significant (median SpO₂ 89% [80–94]) with signs of respiratory distress present in 48.6%; 85.7% received oxygen, and only one was intubated, patients were mainly referred to emergency departments (one death). In secondary missions, the majority of patients were transported with conventional oxygen therapy, while only 20.7% were intubated and mechanically ventilated; the main destination was intensive care, and all patients arrived at their destination alive.

Conclusion: Acute respiratory distress represents a substantial proportion of paediatric EMS activity, predominantly affecting infants and occurring more frequently during the colder months. The high prevalence of hypoxaemia and respiratory support, together with the predominance of secondary transfers and intensive-care admissions, highlights the significant severity and prehospital care needs of these patients.

CO-342: PARENTAL EDUCATION FOR PEDIATRIC FEBRILE SEIZURES: IMPACT ON HOME MANAGEMENT

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Introduction: Febrile seizures (FS) are a frequent pediatric emergency causing parental anxiety, often leading to inappropriate at-home management.

Objective: To evaluate the impact of a Therapeutic Patient Education (TPE) session on parental knowledge and practices regarding FS management.

Methods: A prospective before-after comparative study was conducted at the Pediatric Department B (2019–2020) involving 30 parents of children hospitalized for FS. Knowledge and attitudes were evaluated using a questionnaire before and 21 days after an individual TPE session. McNemar's test was used for statistical analysis ($p < 0.05$).

Results: Following TPE, accurate definition of fever ($> 38^\circ\text{C}$) increased from 13.3% to 60.0% ($p < 0.001$), and compliance with paracetamol dosing intervals improved from 13.3% to 76.7% ($p < 0.001$). Awareness of FS benignity (absence of brain damage) rose from 13.3% to 73.3% ($p < 0.001$). Correct recommended home management (recovery position, child safety) increased from 0% to 53.3% ($p < 0.001$). Inappropriate responses significantly decreased: isolated physical cooling **Methods** dropped from 50% to 10% ($p = 0.001$) and impulsive emergency visits without prior first-aid measures decreased from 26.7% to 6.7% ($p = 0.031$).

Conclusion: TPE significantly enhances parental competence, reduces panic reactions, and rationalizes emergency room visits. Integrating TPE into routine pediatric care is strongly recommended.

CO-343: MANAGEMENT AND OUTCOMES OF PEDIATRIC CRANIOPHARYNGIOMA: EXPERIENCE FROM A SERIES OF SEVEN CASES

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Introduction: Craniopharyngioma is the most common benign epithelial tumor of the sellar and suprasellar region in children. Despite its benign histological nature, its close relationship with the hypothalamic-pituitary axis and optic pathways may result in significant endocrine, visual and neurological impairment. Long-term surveillance is essential because of the risk of recurrence and treatment-related complications.

Objective: To describe the clinical presentation, management, endocrine complications and long-term outcomes of children with craniopharyngioma followed in a pediatric department.

Methods: We retrospectively reviewed seven children diagnosed with craniopharyngioma and hospitalized or followed in the Department of Pediatrics D, Children's Hospital of Tunis. Clinical, radiological, histological, endocrine, therapeutic, and follow-up data were collected.

Results: The mean age at diagnosis was 8.7 ± 3.6 years, with a mean diagnostic delay of 10 ± 11.8 months. Headache and visual disturbances were the most frequent presenting symptoms (71.4% each), followed by growth impairment (42.9%). Magnetic resonance imaging was performed in all patients. The tumors were suprasellar in 42.9% and sellar-suprasellar in 57.1%, with hypothalamic involvement in 42.9% and calcifications in 42.9%. Corticotrophic and thyrotrophic deficiencies were observed in 85.7% of patients, while diabetes insipidus occurred in 71.4%. All patients underwent surgery, with complete resection in 85.7%. Postoperative endocrine replacement therapy was required in all cases. Hydrocortisone, levothyroxine, and desmopressin were prescribed in all patients. Postoperative complications occurred in all cases, mainly visual impairment (57.1%) and obesity (85.7%). During follow-up, disease recurrence occurred in two patients (28.6%), after a mean interval of 9 ± 5.7 years. All patients remained in remission at the last evaluation.

Conclusion: Pediatric craniopharyngioma is associated with substantial endocrine and postoperative morbidity. Long-term multidisciplinary follow-up is essential for early detection of recurrence and optimal management of hormonal and metabolic impairment.

CO-344: ROLE OF BIOLOGIC THERAPY IN JUVENILE IDIOPATHIC ARTHRITIS

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Introduction: Juvenile idiopathic arthritis (JIA) is the most common inflammatory rheumatic disease in children. This study aimed to describe the clinical and biological characteristics and outcomes of children with JIA receiving biologic therapy, and to identify factors associated with disease evolution.

Methods: This retrospective, descriptive, and analytical single-center study was conducted from January 2010 to September 2025, included 32 patients with JIA treated who received biologic therapy at a specialized pediatric rheumatology center.

Results: Among 321 patients followed for JIA, 38 had an indication for biologic therapy and 32 received such treatment. Most patients were female (75%). Mean age at onset of symptoms was 72.7 ± 47.7 months and the mean age at initiation of biologic therapy was 114 ± 56 months. Methotrexate was used before biologic therapy in 90.6% of cases, while etanercept was the most prescribed biologic therapy (46.9%). Mean JADAS decreased from 16.08 before treatment to 7.70,

5.79, and 3.60 at 3, 6, and 12 months, respectively. During follow-up under biologic therapy, 28.1% achieved remission on treatment, 12.5% remission off treatment, 53.1% maintained active disease, and 18.75% experienced relapse. Adverse events, including cytotoxicity, cytopenias, macrophage activation syndrome, and allergic reactions, were rare. Younger age at symptom onset, first consultation, and biologic therapy initiation was associated with a higher likelihood of remission off treatment, whereas previous use of NSAIDs or paracetamol appeared to be associated with a lower risk of persistent active disease. Adalimumab was associated with a higher relapse risk. Overall, biologic therapy significantly improved disease activity, although persistent or relapsing disease remained common.

Conclusion: Identifying prognostic factors and optimizing conventional treatment before initiating biologic therapy may improve long-term disease control. Multicenter studies with larger cohorts and longer follow-up are warranted to confirm these findings.

PÉDOPSYCHIATRIE

CO-345: EFFECTS OF ADVERSE CHILDHOOD EXPERIENCES ON ANXIETY AND DEPRESSION IN ADULTS

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Introduction: Adverse childhood experiences are strongly linked to long-term mental health vulnerabilities. Early exposure to trauma can disrupt emotional regulation and significantly increase the risk of anxiety and depression in adulthood.

The objective of this study was to examine the association between adverse childhood experiences, anxiety, and depression, and to assess whether early-life trauma increases vulnerability to emotional disorders in adulthood.

Methods: We conducted a cross-sectional, descriptive, and analytical study using an anonymous online questionnaire shared via a secure Google Forms link on Facebook and Instagram. Informed consent was obtained electronically before participation. The first section focused on collecting general data regarding socio-demographic information. Two validated psychometric scales were used: the Adverse Childhood Experiences Questionnaire (ACE-Q) and the Hospital Anxiety and Depression Scale (HADS).

Results: We included 403 participants with a mean age of 29.0 years with ages ranging from 18 to 60 years. The sex ratio was 0.24.

The mean ACE-Q score was 2.51 ± 1.85 . Adverse childhood experiences were reported by 85.9% of participants, with 27% having been exposed to at least four events.

The HADS indicated a mean total score of 16.38 ± 8.44 . Anxiety was present in 36.2% of participants, with an average score of 8.87 ± 4.90 . Depressive symptoms affected 25.3% of the sample, with a mean score of 7.97 ± 4.32 .

Both anxiety and depression were significantly correlated with the ACE-Q score ($p < 0.001$) indicating that adverse childhood experiences increased the risk of anxiety (OR = 1.60) and depression (OR = 1.48).

Conclusion: Our findings demonstrate a significant association between adverse childhood experiences and both anxiety and depressive symptoms, underscoring the long-term impact of childhood adversity on adult mental health. These **Results**

emphasize the importance of considering early-life adversity in mental health assessments and support the development of targeted preventive and trauma-informed interventions.

CO-346: IMPACT OF INTERNET ADDICTION ON SLEEP QUALITY: A STUDY AMONG TUNISIAN HIGH SCHOOL STUDENTS

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Introduction: Internet addiction (IA) is an emerging behavioral disorder characterized by uncontrolled digital use that disrupts daily life including sleep quality. In Tunisia, where the internet penetration rate has reached 79.6%, adolescents are particularly vulnerable. This study aims to determine the frequency of IA and its relationship with sleep quality among high school students in the Tunis region.

Methods: we conducted a descriptive cross-sectional study among students aged from 15 to 18 years old in three public high schools in Tunis. We utilized the arab versions of the Young Internet Addiction Test (IAT) and the Pittsburgh Sleep Quality Index (PSQI). Statistical analysis was performed using SPSS.

Results: The sample included 107 girls (53.5%) and 93 boys (46.5%) with a mean age of 16.69 ± 1.09 years. The IAT revealed that 71.5% of adolescents exhibited problematic internet use, categorized as problematic use with potential consequences (59.5%) and severe addiction (12%). Simultaneously, 56.5% of the participants suffered from significant sleep disorders ($PSQI > 5$). Analytical data demonstrated a strong statistical correlation between IA levels and sleep disorders ($P < 0.001$, $V = 0.341$). Forty eight point five percent (48.5 %) of the total sample suffered from both IA and sleep disturbances concurrently. The average sleep duration was recorded at 6.4 ± 1.7 hours.

Conclusion: The high prevalence of IA highlights an urgent need for school-based screening and the implementation of digital hygiene programs to protect adolescent development.

CO-347: BEHAVIORAL AND SOCIODEMOGRAPHIC CORRELATES OF INTERNET ADDICTION IN TUNISIAN ADOLESCENTS

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Introduction: Excessive internet use can lead to addiction, especially in adolescents. This study determines internet addiction (IA) frequency and its behavioral and sociodemographic risk factors among high school students in Tunis.

Methods: A cross-sectional study was conducted in 2025 among Tunisian high school students aged from 15 to 18 years old in three public high schools in Tunis. We used the Arab validated versions of Young Internet Addiction Test (IAT) and Pittsburgh Sleep Quality Index (PSQI). Statistical analysis was performed using SPSS.

Results: The study included 200 students (53.5% girls, 46.5% boys). The IAT revealed that 71.5% of adolescents exhibited problematic internet use. Twelve percent of adolescents showed severe addiction. We identified a significant association between IA and age ($P = 0.039$, $V = 0.182$), with 18-year-olds

showing higher rates of severe addiction. A lack of extracurricular sports was significantly linked to higher IA levels ($P = 0.010$, $V = 0.205$), with 47.9% of problematic users reporting no physical activity. Daily navigation time was strongly correlated with IA ($P < 0.001$, $V = 0.289$), with 45.4% of problematic users spending 3 to 4 hours online daily. Conversely, no significant statistical relationship was found between IA and gender ($P = 0.621$), academic performance ($P = 0.868$), tobacco use ($P = 0.659$), or drug consumption ($P = 0.661$).

Conclusion: Excessive screen time and lack of physical inactivity are primary drivers of IA. Promoting extracurricular sports is an important recommendation to reduce digital dependency among high school students.

CO-348: THE INFLUENCE OF PARENTAL INTERNET HABITS AND FAMILY ENVIRONMENT ON ADOLESCENT INTERNET ADDICTION

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Introduction: Excessive internet use among adolescents can cause behavioral dependency. This problem can be influenced by parental habits and family characteristics. This study determines the influence of parental internet habits and the family environment on adolescent internet addiction (IA).

Methods: A cross-sectional descriptive study was conducted in 2025 among Tunisian high school students aged from 15 to 18 years old in three public high schools in Tunis. We used the arab versions of the Young Internet Addiction Test (IAT). Family characteristics were assessed, and data were analyzed via SPSS.

Results: The sample included 200 students. The IAT revealed that 71.5% of adolescents exhibited problematic internet use. Twelve percent of adolescents showed severe addiction. Most participants (86%) resided with both parents. While 34.5% of parents were frequent internet users, this parental exposure was significantly correlated with the child's IA level ($P = 0.033$, $V = 0.185$). Furthermore, although 52.5% of students believed that internet use was a primary cause of family conflicts, statistical analysis revealed no significant link between the presence of these conflicts and the severity of adolescent IA ($P = 0.583$). Other variables, such as living situations ($P = 0.257$) or parental education, showed no correlation with addiction levels.

Conclusion: Parental digital behavior significantly models adolescent risk. Family-centered prevention is essential, encouraging parents to establish "no-connection zones" to improve family dynamics and reduce problematic internet use.

PHARMACIE

CO-349: ASSESSMENT OF KNOWLEDGE AND PRACTICES REGARDING BLOOD-DERIVED MEDICINAL PRODUCTS IN ONCOLOGY

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Introduction: Blood-derived medicinal products (BDMPs), subject to strict traceability requirements to ensure patient safety, represent a major risk-management issue in oncology. This study aimed to assess the knowledge and practices of healthcare professionals involved in their management.

Methods: A descriptive cross-sectional survey was conducted at the Institut Salah Azaïez using a self-administered questionnaire (32 questions across 7 sections). The survey included pharmaceutical, medical, and paramedical professionals. Data were analyzed using SPSS software.

Results: A total of 41 healthcare professionals participated: pharmaceutical staff (68.3%), nurses (26.8%), and resident physicians (4.9%). Nearly half (48%) had never received specific BDMP training, although 46% had already been involved in their management. General knowledge was satisfactory regarding the BDMP acronym (78%) and plasma origin (74%). However, significant gaps were identified in practical and regulatory aspects. While 70% knew the consequences of improper storage, only 56% were familiar with correct storage and administration procedures. The legal retention period was known by only 26% of participants, the requirement for a dedicated prescription by 40%, and the appropriate action in cases of BDMP non-administration by 46%. Regarding traceability, only 38% reported systematically recording the batch number. Finally, 98% expressed a need for further training.

Conclusion: Despite satisfactory general knowledge, major deficiencies persist regarding regulatory requirements and traceability practices for BDMPs. These findings highlight the need to strengthen professional training to improve the safety of the BDMP circuit in oncology.

CO-350: IMPLEMENTATION OF A MANAGEMENT AND QUALIFICATION STRATEGY FOR SECONDARY REFERENCE STANDARDS

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Introduction: In pharmaceutical quality control, the use of reference standards is essential to ensure the reliability of analytical **Results.** While primary standards are characterized by high purity and official certification, their high cost and limited availability often necessitate the use of secondary standards for routine analysis. Ensuring the metrological traceability of these secondary standards through a rigorous qualification process is a critical regulatory requirement.

This study aimed to establish a standardized procedure for the management and qualification of secondary reference standards and to apply this strategy to glycopyrronium bromide within a national control laboratory.

Methods: A management procedure was developed based on ISO/IEC 17025 and Pharmacopoeial guidelines. The qualification protocol for glycopyrronium bromide involved identity confirmation by Infrared (IR) spectroscopy and High-Performance Liquid Chromatography (HPLC) retention time comparison. Quantitative assay was performed via HPLC, and water content was determined using Karl Fischer titration.

Results: The secondary standard of glycopyrronium bromide was successfully qualified. Identity was confirmed by spectral concordance and a retention time of 3.43 min, compared to

3.42 min for the primary standard. The HPLC method showed excellent repeatability (RSD < 0.62%). The relative content was determined to be 99.6%, which is well within the predefined acceptance criteria of 98.0% to 102.0%.

Conclusion: The implemented strategy provides a reliable framework for the management of secondary standards, ensuring analytical equivalence to primary references. This approach optimizes laboratory resources while maintaining compliance with international regulatory standards for routine pharmaceutical control

CO-351: FAILURE MODE AND EFFECTS ANALYSIS OF WASTE MANAGEMENT IN A PHARMACEUTICAL QUALITY CONTROL LABORATORY

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Introduction: Environmental risk management contributes to safety and regulatory compliance in pharmaceutical quality control laboratories, where hazardous waste is generated daily. The aim of this study was to map the waste management cycle of a pharmaceutical quality control laboratory, assess the risks of each stage, and define corrective actions ensuring the safety and environmental compliance of the process within the ISO 14001:2015

Methods: An analytical study was conducted at Tunisia's National Drug Control Laboratory (LNCM). The waste circuit was mapped into five stages: waste segregation and conditioning, internal collection, temporary storage, elimination, and traceability and documentation. Risk analysis used the failure modes and effects analysis (FMEA) method, criticality being expressed as the Risk Priority Number (RPN = Frequency × Severity × Detectability), each rated on a five-point scale. Failure modes were classified as minor (RPN < 25), moderate (25 ≤ RPN < 50) or critical (RPN ≥ 50), then re-scored after implementation of the action plan.

Results: Seventeen failure modes were detected (RPN 15–75). Before action, 4 were critical (23.5%), 8 moderate (47.1%) and 5 minor (29.4%), with a high average criticality (RPN: 36.5). After implementation, no mode remained critical, one remained moderate (manual transport, RPN = 40) and 16 became minor, reducing average criticality from 36.5 to 13.0.

Conclusion: FMEA enabled objective prioritisation of risks and an effective action plan, supporting regulatory compliance and continuous environmental improvement.

CO-352: DESIGN, DEVELOPMENT, AND VALIDATION OF AN AUDIT CHECKLIST FOR HOSPITAL PSA MEDICAL OXYGEN PRODUCTION

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Introduction: Medical oxygen is an essential medicinal product whose quality, safety, and continuous availability are critical for patient care. The expansion of hospital medical oxygen

production units based on Pressure Swing Adsorption (PSA) technology, particularly following the COVID-19 pandemic, has highlighted the need for standardized tools to assess compliance with regulatory, technical, and organizational requirements.

Aim: to design, develop, and validate an audit guide for hospital PSA medical oxygen production units.

Methods: A comprehensive review of scientific literature and international guidelines was conducted to identify requirements for oxygen production, quality control, maintenance, safety, documentation, and organizational management of PSA units. Based on these requirements, a structured audit guide was developed. The audit guide was incorporated into a Microsoft Excel-based computerized tool to facilitate data collection, automate compliance calculations, and generate audit reports. The tool underwent computer validation, followed by field validation at a PSA medical oxygen production unit.

Results: The checklist comprised 123 criteria across 10 domains, including 32 eliminatory criteria. All criteria were applicable on-site; 97 (78.9%) were compliant, 19 (15.4%) partially compliant, and 7 (5.7%) non-compliant. All 32 eliminatory criteria were validated (100% eliminatory compliance), yielding an overall "audit validated" status. Domain compliance ranged from 50% (nonconformity management/CAPA) and 60% (training/human resources) to 94.4% (maintenance/risk management) and 100% (internal audit, continuous improvement), indicating higher technical than documentary maturity.

Conclusion: The newly developed checklist was computationally reliable and operationally feasible, providing a structured, reproducible tool for assessing compliance and supporting continuous quality improvement, pending validation in additional facilities.

CO-353: IMPACT OF INTERACTIVE CARD-BASED TRAINING ON PHARMACY STAFF KNOWLEDGE OF LASA MEDICATIONS

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Introduction: Look-Alike Sound-Alike (LASA) medications are a major source of medication errors. Training healthcare professionals is an essential strategy to enhance patient safety. Our study aims to evaluate the impact of targeted training on the knowledge and ability of pharmacy staff at Sfax Military University Hospital to identify errors involving LASA medications.

Methods: A descriptive interventional study was conducted among 32 pharmacy staff members. A questionnaire-based pre-test was administered before the intervention. The training combined a theoretical presentation with an interactive card game designed to identify and match LASA medications. The same test was re-administered immediately post-training to assess improvements in knowledge regarding LASA definitions, risk factors, prevention strategies, the medication-use process, LASA medication recognition, and safe practices.

Results: Baseline general knowledge of LASA medications increased from 78% to 100% after the intervention. Substantial improvements were observed in identifying risk factors for LASA errors (22% to 62%), prevention strategies (53% to 81%), and the medication-use process (66% to 93%). Recognition of LASA medications markedly improved from 60% to 97%. Conversely, knowledge of safe practices showed limited progression, from 75% to 84%. The post-training evaluation demonstrated high

acceptability, with 91% of participants expressing favorable opinions, and 100% appreciating the integration of the card game.

Conclusion: Targeted training substantially improved staff knowledge and LASA medication recognition, while the card game enhanced interactivity and acceptability. Extending this educational tool to other healthcare professionals could strengthen medication error prevention and improve patient safety.

CO-354: EVALUATING THE IMPACT OF CORRECTIVE ACTIONS ON CYTOTOXIC DRUG PREPARATION PRACTICES: A FOLLOW-UP CYT

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Introduction: Centralizing cytotoxic drug preparation improves organization, clarifies the division of responsibilities, and facilitates implementation of a quality system. As part of a continuous quality improvement process, a second audit was conducted using the CYTOSAT tool to reassess compliance with Good Preparation Practices (GPP) following the implementation of corrective actions.

Methods: This prospective study was conducted in May 2026 at a centralized cytotoxic drug preparation unit in Tunis. An action plan was implemented for items identified as noncompliant during the initial audit, and a re-audit was performed nine months later using the same self-assessment tool, Cyto-SAT. Data were analyzed using SPSS.

Results: The initial assessment showed a satisfactory overall compliance rate of 94.76%. Following the implementation of corrective actions, overall compliance increased to 98.33%, reflecting a total progress rate of 3.57%. Improvements were observed across most domains, particularly in cleaning (93.75% to 100%), logistics (87.50% to 96.88%), personnel (89.29% to 92.86%), and management (88.64% to 95.45%). Preparation compliance increased from 98.26% to 100%, while prescription and waste management remained at 100%. Of the 19 corrective actions, 57.9% had been fully implemented, 31.6% were ongoing, and 10.5% had not yet been initiated. Importantly, 100% of corrective actions with a short-term deadline (≤ 6 months) were completed within the planned timeframe.

Conclusion: The re-audit using CYTOSAT tool demonstrated an improvement in overall compliance following the implementation of corrective actions. A regular reassessment and monitoring of action plans are essential to sustain improvements and strengthen the quality and safety of cytotoxic drug preparation.

CO-355: ASSESSMENT OF NON-CONFORMITIES IN CYTOTOXIC PREPARATIONS USING HPLC-FIA-PDA METHODS IN A CENTRALIZED

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Introduction: The centralised preparation of cytotoxic drugs is a key step in ensuring the safety of the chemotherapy supply chain. Due to their narrow therapeutic index, any error in dose or concentration can compromise patient safety. It is therefore essential to carry out a reliable final check on the preparations to verify their compliance before they are released.

The aim of this study was to assess quality control practices for cytotoxic preparations and identify the main causes of non-conformities using HPLC-FIA-PDA **Methods**.

Methods: A retrospective descriptive study conducted over 7 weeks (1 July 2026–21 August 2026) at the CCPU of Salah Azaiez Institute. The cytotoxic preparations were subjected to analytical control using an HPLC-FIA system on a selection of previously validated molecules. The **Results** were compared with the expected theoretical values.

Results: A total of 233 preparations were tested by FIA : oxaliplatin (54), docetaxel (43), cyclophosphamide (26), epirubicin (25), etoposide (22), carboplatin (20), cisplatin (22), irinotecan (19), and doxorubicin (2). Of these, 91% were compliant. Twenty-two preparations (9%) were non-compliant at the first sampling; only two remained so after a second sampling. This was mainly attributed to inadequate vial homogeneity (86% of cases), followed by concentration changes (5%) and handling errors (5%).

Conclusion: A structured final analytical control is essential to ensure the safety and reliability of cytotoxic preparations. HPLC-FIA-PDA provides an additional check to detect manipulation errors and non-conformities, supporting continuous improvement of preparation practices.

CO-356: MAPPING ANALYTICAL RISKS IN PHARMACEUTICAL QUALITY CONTROL: AN FMEA-BASED HPLC ASSESSMENT

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Introduction: Analytical control using high-performance liquid chromatography (HPLC) is essential for ensuring the safety of preparations by verifying drug concentration before release. A preliminary risk analysis using FMEA was conducted to identify and categorize failures.

The aim of this study is to map, using FMEA, risks associated with the HPLC analytical control process using validated analytical **Methods**, and compare theoretical risks with observed nonconformities.

Methods: An FMEA matrix covered the process from preparation to release, including homogenization, sampling, sample preparation, HPLC analysis. The study was conducted from January to July 2026 at the Bone Marrow Transplant Center. A multidisciplinary panel scored frequency (F), severity (G), and detectability (D) using predefined 1–5 ordinal scales, followed by consensus adjudication. Risk priority number (RPN = F × G × D) classified risks as critical (≥24), moderate (9–23), or acceptable (<9), in accordance with ICH Q9. Identical RPNs were ranked according to severity, followed by frequency.

Results: The FMEA identified 12 failure modes: 6 critical, 4 moderate, and 2 acceptable. Critical risks included errors in quantity or concentration, insufficient homogenization, incorrect vial labeling, sample mix-ups or injection-order errors, and release before or without analytical testing. Moderate risks included non-representative sampling, chromatographic parameter-setting errors, and chromatogram interpretation. Vial breakage and insufficient HPLC system performance were acceptable.

The theoretical risk ranking showed a significant association with the empirical frequency of observed non-conformities (Spearman's $\rho = 0.811$, 95% CI: 0.444–0.945, $p = 0.001$).

Conclusion: FMEA identified high-risk steps and priorities. Concordance with observed nonconformities supports

its relevance for improving process safety. Standardizing homogenization, sample identification, injection sequences, and testing before release should be prioritized.

CO-357: USE OF TRADITIONAL HERBAL REMEDIES IN CANCER PATIENTS: PREVALENCE, PRACTICES, AND POTENTIAL TOXICITY

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Introduction: Many cancer patients turn to natural remedies to manage their illness and alleviate chemotherapy-induced adverse effects. However, plants used in traditional medicine are not uniformly effective and can lead to harmful herb-drug interactions or toxicities.

This study aimed to evaluate the prevalence of traditional plant-based therapy use among oncology patients in Tunisia, alongside its associated factors and reported adverse effects

Methods: A prospective study was conducted at the oncology department of the Teaching Hospital of Monastir (September 2023). Pharmacy residents collected data using standardized forms, followed by SPSS analysis.

Results: Among 56 cancer patients (median age 47; 57% male), 73.2% used traditional plant-based therapies, predominantly Ephedra alata (53.7%) and Globularia alypum (41.5%). While physically sourced from herbalists (46.3%) or through direct harvesting (29.3%), the decision to use these plants was primarily influenced by social media (76.0%).

Patients sought them mainly for purported anticancer effects (67.9%), immune boosting (14.3%), symptom relief (5.4%), and antidepressant action (3.6%).

Adverse effects, notably tachycardia and abnormal liver function tests, were reported by 15.0% of users.

Univariate analysis revealed that plant usage was significantly associated with age (Wilcoxon test, $p=0.005$) and higher educational level (Chi-square test, $p=0.026$), but not with sex ($p=0.965$).

Conclusion: Consuming potentially toxic plants with unproven efficacy poses significant health risks. Healthcare professionals must proactively raise awareness among patients regarding the safe use of traditional remedies to prevent adverse outcomes.

PHARMACOLOGIE

CO-358: PHYTOCHEMICAL PROFILE AND BIOLOGICAL ACTIVITIES OF MYRTUS COMMUNIS L. FROM KROUMIRIE, TUNISIA

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Introduction: *Myrtus communis* L. (Myrtaceae), commonly known as myrtle, is a medicinal and aromatic plant characteristic of the Mediterranean flora. Traditionally used for the management of various ailments, it represents a promising source of bioactive secondary metabolites. This study aimed to investigate the phytochemical profile and antioxidant, antimicrobial and peripheral antinociceptive activities of a crude extract (F0) and an ethanolic fraction (F4) of *M. communis* leaves collected in the Kroumirie region of Tunisia.

Methods: Phytochemical screening and spectrophotometric assays were used to characterize total polyphenols, flavonoids and condensed tannins. Antioxidant activity was assessed using DPPH radical-scavenging and β -carotene bleaching assays. Antimicrobial activity was evaluated by agar disk diffusion and broth microdilution against reference and clinical bacterial and fungal strains. Peripheral antinociceptive activity was assessed in vivo using the acetic acid-induced writhing test in mice.

Results: F0 and F4 were rich in polyphenols (1480 ± 0.01 and 500 ± 0.001 mg GAE/g dry extract, respectively), flavonoids (390 ± 0.0004 and 210 ± 0.007 mg QE/g) and condensed tannins (350 ± 0.003 and 420 ± 0.03 mg CE/g). F0 showed marked DPPH-scavenging activity ($IC_{50} = 0.009 \pm 0.0003$ mg/mL), whereas F4 showed greater activity in the β -carotene assay ($IC_{50} = 0.010 \pm 0.0002$ mg/mL). F4 displayed antibacterial activity, particularly against Gram-positive cocci, with a MIC of 0.15 mg/mL against *Staphylococcus epidermidis*. The essential oil showed broader antibacterial activity, including against clinical *Klebsiella pneumoniae* and *Acinetobacter baumannii*, and antifungal activity against *Cryptococcus neoformans*. The combination of F4 and essential oil enhanced inhibition against *Salmonella typhimurium* and *K. pneumoniae* compared with either preparation alone. Both F0 and F4 produced substantial peripheral antinociception, with inhibition of acetic acid-induced writhing reaching 93.63%.

Conclusion: *M. communis* from Kroumirie is a rich source of bioactive phytochemicals exhibiting marked antioxidant, antimicrobial, and peripheral antinociceptive activities. These findings support further investigation of its pharmacological potential and underlying mechanisms, while additional studies are required before any therapeutic application can be considered.

CO-359: DEVELOPMENT AND VALIDATION OF A HPLC-UV METHOD FOR B-LACTAM THERAPEUTIC DRUG MONITORING

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Introduction: β -lactam antibiotics are essential therapeutic agents whose efficacy is closely correlated with maintaining plasma concentrations above the Minimum Inhibitory Concentration (MIC). In critically ill patients, significant pharmacokinetic variability justifies the use of Therapeutic Drug Monitoring (TDM) to optimize dosing and limit the emergence of bacterial resistance. This study aims to develop and validate a simultaneous assay method using High-Performance Liquid Chromatography with UV detection (HPLC-UV) for cefazolin, cefotaxime, and piperacillin.

Methods: The analysis was performed on an Agilent 1260 Infinity II system using a C18 column. Plasma sample preparation relied on protein precipitation with acetonitrile, followed by liquid-liquid extraction with chloroform. Chromatographic separation employed a gradient elution consisting of acidified distilled water (pH 2.5) and acetonitrile. The method validation

was conducted in accordance with the international ICH M10 guideline.

Results: Although initially included, ampicillin was excluded due to unstable chromatographic performance. For the other analytes, the method proved selective and linear over a range of 10 to 120 μ g/mL ($R^2 \geq 0.997$). Accuracy (bias $\leq 12.7\%$) and both intra- and inter-day precision (CV $\leq 10.8\%$) satisfied the acceptability criteria. Extraction yields were high ($\geq 88\%$) and reproducible. A significant carry-over effect was identified for cefotaxime, requiring a reinforced rinsing protocol.

Conclusion: This HPLC-UV method offers a robust, precise, and economically accessible alternative to reference techniques such as LC-MS/MS for routine hospital practice. It facilitates personalized patient monitoring to ensure optimal antibiotic exposure. Future work involving samples from treated patients is required to confirm its robustness under real-world clinical conditions

CO-360: DEVELOPMENT AND VALIDATION OF HPLC-UV FOR FLUCONAZOLE AND VORICONAZOLE IN HUMAN PLASMA

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Introduction: Fluconazole (FCZ) and voriconazole (VCZ) are widely used azole antifungals. Their pharmacokinetic variability, particularly for VCZ, may warrant therapeutic drug monitoring in selected clinical situations. A simple and accessible analytical method is therefore valuable for laboratories without mass spectrometry facilities.

Aim: To develop and validate an HPLC-UV method for the determination of FCZ and VCZ in human plasma.

Methods: Following optimization, chromatographic separation was performed on a C18 column using an acetonitrile-water gradient at a flow rate of 1.0 mL/min, an injection volume of 10 μ L, and UV detection at 256 and 261 nm. Plasma samples were processed by protein precipitation with acetonitrile, using carbamazepine as the internal standard. Validation was performed using accuracy profiles with acceptance limits of $\pm 20\%$.

Results: The method provided well-resolved peaks with retention times of 3.2 min for FCZ, 5.9 min for the internal standard, and 7.0 min for VCZ, without relevant matrix interference. For VCZ, mean recoveries ranged from 103.1% to 104.9%, with relative biases of 3.1% to 4.9%. For FCZ, mean recoveries ranged from 100.5% to 101.4%, with relative biases of 0.5% to 1.4%. All tolerance intervals remained within the predefined $\pm 20\%$ acceptance limits.

Conclusion: The developed HPLC-UV method showed satisfactory chromatographic separation and analytical performance, providing a simple and accessible approach for plasma determination of FCZ or VCZ according to clinical needs.

CO-361: LARGE LANGUAGE MODELS FOR PERSONALIZED ISONIAZID DOSING AFTER ACETYLTATION TESTING: COMPARATIVE STUDY

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Introduction: Isoniazid exposure shows substantial inter-subjects' variability, supporting personalized dosing based on therapeutic drug monitoring. Large language models (LLMs) may assist dose optimization, but their ability to reproduce pharmacologist-guided recommendations and respect clinical dosing constraints remains uncertain.

Methods: We retrospectively analysed acetylation tests received in our laboratory from 02/01/2026 to 31/07/2026. ChatGPT-5.6 Luna, Claude Sonnet 5, Gemini 3.6 Flash and Perplexity Standard received the same prompt with predefined instructions and identical data, including isoniazid serum concentration at 3 hours post dosing (C3h), current dosage, formulation, minimum and maximum doses generated by our in-house validated model; pharmacologist recommendations were withheld. Exact agreement with pharmacologist recommendations, deviation in dose, treatment adherence and predicted C3h target (1–2 mg/L) were assessed.

Results: A total of 533 acetylation tests were included. An exact agreement with pharmacologist recommendations was 85.6% for ChatGPT, 83.1% for Claude, 70 % for Gemini and 69.2% for Perplexity. Agreement within ± 50 mg/day was 94.2%, 91.6%, 79.4% and 78.4%, for ChatGPT, Claude, Gemini and Perplexity, respectively. Predicted C3h was within 1–2 mg/L for 67.2%, 70.4%, 80.7% and 80.7% of recommendations for ChatGPT, Claude, Gemini and Perplexity, respectively compared with 62.9% for pharmacologist recommendations.

Conclusion: LLMs showed substantial differences in individualized isoniazid dosing. ChatGPT and Claude most closely reproduced pharmacologist-guided recommendations, whereas Gemini and Perplexity showed greater divergence but higher predicted target achievement. These findings support LLMs as potential decision-support tools, while emphasizing pharmacological oversight and prospective clinical validation.

CO-362: HYPERSENSITIVITY TO CEFAZOLIN: SELECTIVE ALLERGY AND CROSS-REACTIVITY PATTERNS CONFIRMED BY AN ALLER

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Introduction: Beta-lactams are frequently suspected as responsible for drug hypersensitivity reactions(HSR). However, cross-reactivity remains uncommon. Although cefazolin is widely prescribed, it may occasionally induce HRS, sometimes presenting with variable cross-reactivity patterns. Our aim is to assess cross-reactivity profiles in patients with confirmed HSR to cefazolin

Methods: We conducted a retrospective cross-sectional study of patients with skin test(ST) confirmed cefazolin HRS in the Clinical Pharmacology Department-Monastir-Tunisia-(2019-2025). ST was performed according to the recommendations of the European Network for Drug Allergy(ENDA). Cross-reactivity with penicillins and other cephalosporins was assessed using ST and, when Results were negative, followed by oral provocation tests(OPT). The OPT protocol consisted of stepwise administration of 5%, 15%, 30%, and 50% of the target dose at 30-minute intervals.

Results: Nine patients with cefazolin-confirmed HSR were included in the study, with a mean age of 58 ± 11 years (1 male and 9 females). Initial reactions included generalized maculopapular exanthema(n=5), anaphylactic shock(n=2), urticaria(n=1), and one unspecified reaction. Median onset was 5 days IIQ[2-8]. In five patients(55.55%), both ST and OPT to penicillins and cephalosporins were negative, confirming selective cefazolin hypersensitivity. In two patients, ST to all penicillins and cephalosporins were positive. In two patients, ST were negative to all the drugs except cefotaxime; OPT with cefuroxime was, however, negative.

Conclusion: While selectivity to cefazolin was the predominant pattern, other sensitization profiles were also observed, including beta-lactam ring sensitization and multidrug hypersensitivity. Thus, the pattern of cefazolin HSR appears broader than anticipated, and allergological investigation remains the cornerstone for identifying safe therapeutic alternatives.

CO-363: ARTIFICIAL INTELLIGENCE IN CYCLOSPORINE THERAPY AND PRECISION IMMUNOSUPPRESSION: A MINI-REVIEW

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Introduction: Cyclosporine (CsA) is an essential immunosuppressant used after solid-organ and hematopoietic stem cell transplantation.

Its narrow therapeutic index and marked interindividual pharmacokinetic variability make individualized dosing challenging and require therapeutic drug monitoring (TDM).

Population pharmacokinetic and Bayesian approaches can improve dose individualization by integrating patient-specific characteristics and drug concentrations. [1,2]

Methods: This work provides a brief overview of recent studies evaluating artificial intelligence, machine learning (ML), deep-learning, and pharmacokinetic models for individualized cyclosporine dosing and concentration prediction in transplant recipients.

A literature search was performed in PubMed and ScienceDirect using keywords related to "cyclosporine," "artificial intelligence," "machine learning," "deep learning," "therapeutic drug monitoring," and "precision dosing."

Studies were reviewed based on their modeling approaches,

predictive performance, and validation strategies.

Results: Early studies demonstrated the feasibility of artificial neural networks for predicting both cyclosporine concentrations and doses in kidney transplant recipients, suggesting their potential as clinical decision-support tools.[3] ML approaches have been developed recently, using large therapeutic drug monitoring datasets. In 2,069 allogeneic hematopoietic stem cell transplant patients, an XGBoost model predicted CsA trough concentrations 3-4 days in advance, with prediction accuracy within $\pm 30\%$ exceeding 80% and successful external validation [4].

In adult renal transplant recipients, a comparison of 7 ML algorithms showed that an artificial neural network achieved an R2 of 0.75 and outperformed a conventional population pharmacokinetic model for CsA concentration prediction [5]. Recent precision-dosing research further supports combining TDM, Bayesian pharmacokinetics and AI to move beyond conventional trough-based monitoring [6].

Conclusion: AI may transform cyclosporine TDM from reactive concentration monitoring toward predictive precision dosing.

CO-364: VARIABILITY OF HIGH-DOSE METHOTREXATE PLASMA CONCENTRATIONS IN PATIENTS WITH OSTEOSARCOMA

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Introduction: Given its narrow therapeutic index and inter- and intra-individual pharmacokinetic variability, therapeutic drug monitoring (TDM) of high-dose methotrexate (HD-MTX) is essential. As MTX is predominantly eliminated by the kidneys, impaired renal function may lead to drug accumulation and increased toxicity risk [1].

Methods: A retrospective study was conducted in 32 patients with osteosarcoma receiving HD-MTX. Data collected included age, sex, weight, body surface area, total MTX dose, and serum creatinine.

Plasma MTX concentrations at H24, H48, and H72 after the start of infusion were measured using the ARCHITECT analyzer with the CMIA (chemiluminescent microparticle immunoassay) technique.

Results: The median age was 17.1 years [8.1–29.3], with a sex ratio (M/F) of 1.46.

Median plasma MTX concentrations were 2.68 [IQR: 1.50–4.64] $\mu\text{mol/L}$ at H24, 0.18 [IQR: 0.13–0.27] $\mu\text{mol/L}$ at H48, and 0.05 [IQR: 0.04–0.08] $\mu\text{mol/L}$ at H72.

A significant positive correlation was observed between the H24 concentration and serum creatinine ($p = 0.022$). At H72, a positive trend approaching significance was also noted ($p = 0.052$). In contrast, no significant correlation was found between the H48 concentration and serum creatinine ($p = 0.243$).

No significant association was observed between total MTX dose and plasma concentrations at any time point.

Conclusion: These findings demonstrate variability in HD-MTX exposure and suggest an early influence of renal function on MTX elimination. Therapeutic drug monitoring TDM, particularly the assessment of methotrexate concentrations at H24, enables the early identification of delayed drug elimination and facilitates the timely implementation of appropriate corrective measures, thereby contributing to optimal and individualized patient management.

PHYSIOLOGIE ET EXPLORATIONS FONCTIONNELLES

CO-365: DIAGNOSTIC OUTCOMES OF THE 2023 RACE-NEUTRAL AND 2012 RACE-SPECIFIC GLI EQUATIONS IN TUNISIAN ADULTS

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Introduction: In 2023, the Global Lung Function Initiative (GLI) introduced race-neutral spirometric reference equations (2023-GLI-RNEs) to address concerns of racial bias inherent in earlier 2012-GLI race-specific models. While the 2012-GLI Caucasian equations (2012-GLI-CEs) were previously shown to adequately reflect the spirometry of contemporary Tunisian adults, the applicability of the 2023-GLI-RNEs remains untested. Aim: To compare the diagnostic outcomes of the 2023-GLI-RNEs and the 2012-GLI-CEs in an adult Tunisian population.

Methods: A cross-sectional study was conducted on 3160 Tunisian adults (33.8% female, 21.2% obese, 84.1% smokers) aged 18–84 years. Participants underwent standardized spirometry in accordance with the most updated international guidelines. Z-scores and percent predicted values for FEV1, FVC, and FEV1/FVC ratio were computed using both norms. Diagnostic classifications (e.g. normal pattern, obstructive ventilatory impairment (OVI), non-specific ventilatory impairment or spirometric restrictive pattern (NSVI/SRP), mixed ventilatory impairment (MVI), isolated low FEV1 (ILF)) were compared across the two norms.

Results: Diagnostic classifications differed significantly between the two norms. Compared with 2012-GLI-CEs, percent predicted FEV1 and FVC values were significantly higher when interpreted using 2023-GLI-RNEs, by 5.76 and 7.07 percentage points, respectively, while the percent predicted FEV1/FVC value was lower by 0.82 percentage points. Compared to 2012-GLI-CEs, 2023-GLI-RNEs identified more cases of OVI and normal spirometry (8.89% vs. 9.56% ($p = 0.001$); and 76.55% vs. 85.73% ($p = 0.001$), respectively) and fewer cases of NSVI/SRP, ILF, and MVI (12.12% vs. 3.20% ($p = 0.001$); 2.44% vs. 1.52% ($p = 0.005$); and 5.09% vs. 3.70% ($p = 0.001$), respectively).

Conclusion: In a large sample of Tunisian adults, both norms produced significantly different diagnostic classifications across all spirometric patterns, underscoring the need for population-specific validation before the 2023-GLI-RNEs are adopted in

clinical practice.

CO-366: EXPIRATORY FLOW LIMITATION AS A MARKER OF SMALL-AIRWAY DYSFUNCTION IN INTERSTITIAL LUNG DISEASE.

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Introduction: Expiratory flow limitation (EFL) is classically associated with obstructive lung disease but may also arise from abnormalities in small-airway function and heterogeneous lung emptying. Its occurrence and physiological significance in interstitial lung disease (ILD) remain poorly defined. We hypothesized that EFL identifies a distinct functional phenotype in ILD, characterized by impaired expiratory flow and increased air trapping despite preserved global lung volumes.

Aim: To determine the prevalence of EFL in patients with ILD and to characterize its association with spirometric indices, static lung volumes, and flow-derived parameters.

Methods: In this retrospective observational study, 98 patients with ILD underwent spirometry, body plethysmography, and flow-volume loop analysis. Patients were stratified according to the presence or absence of EFL. Clinical characteristics, pulmonary function parameters, lung volumes, and flow-derived indices were compared between groups.

Results: EFL was identified in 19 patients (19.4%). Patients with EFL exhibited significantly lower AEX (5.73 [3.86–7.82] vs. 7.37 [5.55–11.22] L2-s-1; $p=0.031$), FEV1 (1.59 [1.45–1.93] vs. 2.11 [1.74–2.66] L; $p=0.0007$), and FEV1/FVC (0.66 [0.50–0.78] vs. 0.78 [0.73–0.83]; $p=0.0002$). Residual volume (RV)/ total lung capacity (TLC) was significantly higher in patients with EFL (44.5 ± 8.6% vs. 33.8 ± 11.9%; $p=0.0011$), consistent with greater air trapping. Dyspnea was reported by all patients with EFL compared with 79.7% of those without EFL. In contrast, TLC and 6-minute walk distance did not differ significantly between groups.

Conclusion: EFL may identify a functional component of small-airway involvement that is not captured by conventional assessment of restrictive pattern. EFL and flow-derived indices may therefore provide complementary information for phenotyping pulmonary dysfunction in ILD and warrant further investigation as potential markers of small-airway involvement.

CO-367: CLINICAL AND RADIOLOGICAL FACTORS ASSOCIATED WITH LUNG FUNCTION IN BRONCHIECTASIS

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Introduction: Bronchiectasis is a chronic airway disease associated with recurrent exacerbations and progressive pulmonary function impairment. The relationship between radiological phenotype and functional impairment remains incompletely characterized. This study aimed to assess associations between radiological and clinical characteristics and pulmonary function in non-cystic fibrosis bronchiectasis.

Methods: We retrospectively studied 61 patients with non-cystic fibrosis bronchiectasis followed at a tertiary care center in Tunisia between 2018 and 2025. Clinical characteristics, chest computed tomography findings, pulmonary function tests, arterial blood gases, inflammatory biomarkers, and annual exacerbations were collected. Associations between radiological patterns, clinical features, and functional parameters were analyzed.

Results: The study included 39 men (63.9%) and 22 women (36.1%). Cylindrical bronchiectasis predominated (72.1%), followed by cystic (19.7%) and varicose bronchiectasis (14.8%); 42.6% had bilateral disease. Cylindrical bronchiectasis was associated with higher total lung capacity (6.17 ± 1.72 vs 3.63 ± 0.45 L, $p=0.005$), whereas varicose bronchiectasis was associated with lower post-bronchodilator FVC (1.75 ± 1.15 vs 2.95 ± 1.22 L, $p=0.046$). Bilateral disease and dyspnea were associated with lower FVC, FEV1, and FEV1/FVC ($p<0.05$). Annual exacerbations correlated negatively with post-bronchodilator FVC ($r=-0.427$, $p=0.007$) and FEV1/FVC ($r=-0.348$, $p=0.032$). CRP correlated negatively with post-bronchodilator FEV1% ($r=-0.383$, $p=0.014$), while PaCO2 correlated negatively with FVC% ($r=-0.471$, $p=0.005$) and post-bronchodilator FEV1/FVC ($r=-0.499$, $p=0.003$).

Conclusion: Radiological phenotype, disease extent, dyspnea, exacerbation frequency, and inflammatory and gas-exchange parameters were associated with pulmonary function impairment in non-cystic fibrosis bronchiectasis.

CO-368: BEYOND PRISM: PLETHYSMOGRAPHIC DISSECTION OF A NON-OBSTRUCTIVE SPIROMETRIC PHENOTYPE

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Introduction: Preserved ratio impaired spirometry (PRISm) is increasingly recognised as a heterogeneous physiological pattern rather than a specific disease entity. Characterised by reduced FEV1 with a preserved FEV1/FVC ratio, it may reflect distinct underlying abnormalities that cannot be distinguished by spirometry alone. Static lung volume assessment may provide additional physiological phenotyping of PRISm, yet its underlying lung-volume phenotypes remain poorly described. We aimed to characterize plethysmographic patterns in patients with PRISm and assess their association with plethysmographically confirmed restriction.

Methods: We conducted a cross-sectional study of patients undergoing pulmonary function testing at the Department of Physiology and Functional Explorations, Farhat Hached University Hospital, Sousse, Tunisia. PRISm was defined as FEV1 z-score <-1.645 with FEV1/FVC z-score ≥ -1.645 . Spirometric

and static lung volume z-scores were derived from Global Lung Function Initiative (GLI)-2012 and GLI-2021 Caucasian reference equations, respectively. Restriction was defined by Total Lung Capacity (TLC) z-score ≤ -1.645 . Complex restriction was defined as reduced TLC without airflow obstruction and an elevated RV/TLC z-score >1.645 . Multivariable logistic regression assessed the association between PRISm and restriction.

Results: Among 210 patients, 59 (28.1%) fulfilled PRISm criteria. Forty-seven had adequate plethysmographic data for TLC assessment, of whom 37 (78.7%) had confirmed restriction. Among patients with restrictive PRISm, 12/37 (32.4%) exhibited a complex restrictive phenotype, characterised by reduced TLC with disproportionately increased RV/TLC. PRISm was strongly associated with restriction (OR 14.37, $p < 0.001$), with the association persisting after adjustment for age and body mass index (aOR 15.40, 95% CI 6.56–36.21; $p < 0.001$).

Conclusion: In this cohort, PRISm was predominantly associated with reduced TLC and encompassed distinct volumetric subtypes, including complex restriction. These findings suggest that the preserved FEV1/FVC ratio does not define a uniform physiological entity and that lung-volume assessment may uncover clinically meaningful heterogeneity within PRISm.

CO-369: DIAGNOSTIC ACCURACY OF A SPIROMETRIC RESTRICTIVE PATTERN FOR DETECTING CONFIRMED RESTRICTION

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Introduction: A reduced FVC with a preserved FEV1/FVC ratio is commonly considered suggestive of a restrictive ventilatory pattern. However, the diagnostic accuracy of this spirometric pattern remains incompletely characterised against the physiological reference standard, total lung capacity (TLC). The present study assessed the diagnostic performance of a spirometric restrictive pattern for identifying plethysmographically confirmed restriction.

Methods: We retrospectively analysed 210 patients who underwent both spirometry and body plethysmography. A spirometric restrictive pattern was defined as FVC z-score ≤ -1.645 with FEV1/FVC z-score ≥ -1.645 . Restriction was defined as TLC z-score ≤ -1.645 . Z-scores were calculated using Global Lung Function Initiative (GLI) 2012 reference equations for spirometry and GLI 2021 equations for static lung volumes. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) were calculated using plethysmographically measured TLC as the reference standard.

Results: Complete data were available for 174 patients, including 63 with confirmed restriction. The spirometric restrictive pattern identified 40/63 patients with reduced TLC, corresponding to a sensitivity of 63.5%. Conversely, 8 patients fulfilled the spirometric criterion despite normal TLC, yielding a specificity of 92.8%. PPV and NPV were 83.3% and 81.7%, respectively. Notably, 23/63 patients (36.5%) with confirmed restriction had no spirometric restrictive pattern. Among 59 non-obstructed patients with confirmed restriction, 12 (20.3%) exhibited a complex restrictive phenotype.

Conclusion: The high specificity but moderate sensitivity of the spirometric restrictive pattern implies that more than one in three patients with confirmed restriction would be missed by spirometry alone. These findings support the complementary

role of body plethysmography when restriction is clinically suspected, even in the absence of a spirometric restrictive pattern.

PNEUMOLOGIE

CO-370: IMPACT OF AN INTERACTIVE PHYSIOPATHOLOGY EDUCATIONAL INTERVENTION ON TREATMENT ADHERENCE IN ASTHMA

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Introduction: Suboptimal adherence to controller therapy remains a major cause of asthma exacerbations, patient misconceptions viewing asthma as an intermittent rather than chronic disease can lead to over-reliance on reliever therapy instead.

Aim: Evaluate the impact of a physiopathology educational intervention on inhaled corticosteroid (ICS) adherence and quality of life (QOL) in asthma.

Methods: A prospective comparative study involving adult asthma patients with sub-optimal baseline adherence (Asthma Adherence to Medication Questionnaire AAMQ < 48). They were divided 1:1 to either:

- Control group (G1: n=39): Standard asthma care

- Intervention group (G2: n=39): Standard asthma care plus a 3-minute physiopathology education using a figure with the analogy linking airway inflammation ("the fire") and bronchospasm ("the smoke").

An evaluation of CSI adherence by AAMQ, asthma control by ACT and QOL by SF36 questionnaire was performed at baseline and after 6 months.

Results: Of 133 patients assessed for eligibility, 78 were included. The mean age was 42.6 years, with predominance of females (57%). There was no difference in ICS baseline adherence between the 2 groups (mean AAMQ score 34 ± 7 vs 35 ± 6 , $p = 0.5$). Asthma was uncontrolled or partially controlled in 90% of cases with an impaired QOL for 73% of patients.

There was a significant improvement in ICS adherence in G2 compared to G1 (mean AAMQ 57 ± 3 vs 42 ± 7 $p = 0.003$), as well as in QOL ($p = 0.001$). Patients with baseline ACT ≥ 20 maintained disease control more frequently in G2 compared to G1 (95% vs 79.5%, $p = 0.004$).

Conclusion: A physiopathology educational intervention led to a significant improvement in ICS adherence, asthma control and QOL.

POLITIQUE DE SANTÉ

CO-371: PATIENT SATISFACTION AND ACCEPTABILITY OF TELECONSULTATION IN NORTH-WESTERN TUNISIA

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Introduction: Teleconsultation has expanded rapidly worldwide, offering a potential solution to reduce geographic health inequities. Data on patient satisfaction and acceptability from medically underserved regions of developing countries remain limited. This study evaluated patient satisfaction/acceptability of teleconsultation at the Regional Hospital of Jendouba, Tunisia.

Methods: A cross-sectional, descriptive study was conducted among patients who had undergone at least one teleconsultation at the regional hospital of Jendouba, over a period of 3 months from Mars to May 2026. Satisfaction was assessed using a structured questionnaire covering five dimensions (physician-patient relationship, technical quality, accessibility, confidentiality, and overall satisfaction/behavioral intention) for a maximum score of 135 points.

Results: Of 125 patients solicited, 95 participated (78%). The mean age was 50 ± 18 years; 72.6% were women, and 84.2% used teleconsultation for the first time. The mean total satisfaction score was $123.41 \pm 7.9/135$. Satisfaction was high for the physician-patient relationship (91.6%) and technical quality (85–92% across items). Accessibility was the most valued dimension: 98.1% cited avoidance of travel as a major advantage, and 100% felt teleconsultation facilitated access to care. Confidentiality obtained the lowest, though still favorable, score ($21.49 \pm 3.81/25$). Acceptability indicators were strong, with 89.5% reuse intention and 95.7% willingness to recommend teleconsultation to others. Teleconsultation also led to a modification of the care pathway in 11.6% of consultations.

Conclusion: Teleconsultation, in this study, was associated with high patient satisfaction and strong acceptability, driven mainly by accessibility gains and a well-perceived physician-patient relationship. These findings support the wider integration of teleconsultation as a sustainable tool for improving access to specialized care in medically underserved regions.

CO-372: BURDEN OF FAMILY CAREGIVERS OF WOMEN WITH ADVANCED BREAST CANCER: A CROSS-SECTIONAL STUDY IN TUNISIA

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Introduction: Breast cancer is the most common cancer among women worldwide, and family caregivers play a central role in providing home-based support, particularly in advanced disease. This responsibility, often undertaken without adequate preparation or resources, may result in substantial physical, psychological, emotional, and financial burden. This study aimed to assess the burden experienced by primary family caregivers of women with stage III or IV breast cancer.

Methods: We conducted a cross-sectional study over three months (January–March 2026) across three Tunisian oncology centers: the Salah Azaiez Institute, the Medical Oncology and Radiotherapy Center of Jendouba, and the Surgical Oncology Department of Jendouba. Primary family caregivers aged ≥ 18 years who had provided continuous care for at least three months to women with stage III or IV breast cancer were included using purposive sampling. Caregiver burden was assessed using two validated instruments: the Zarit Burden Interview (ZBI) and the short-form Burden Scale for Family Caregivers (BSFC-s). Associations between caregiver burden and sociodemographic and clinical characteristics were analyzed.

Results: Sixty-nine primary caregivers were included; 33.3% were aged ≥ 50 years, with a slight female predominance (52.2%). Most were married (65.2%) and employed (36.2%). The mean ZBI score was 40.84 ± 13.03 (range, 11–65), with 47.8% reporting mild, 39.1% moderate, and 7.3% severe burden. The mean BSFC-s score was 17.14 ± 4.60 (range, 4–26), with 69.6% classified as experiencing heavy burden, 24.6% mild-to-moderate burden, and 5.8% minimal burden. Female caregivers reported significantly higher burden than male caregivers. Stage IV disease and greater patient dependency were significantly associated with higher burden, with 79% of caregivers of patients with severe-to-major dependency reporting moderate-to-severe burden.

Conclusion: Family caregivers of women with advanced breast cancer in Tunisia experience a substantial burden. Burden was significantly associated with caregiver gender, disease stage, and patient dependency level. The complementary use of the ZBI and BSFC-s may provide a broader assessment of caregiver burden. Systematic burden screening and targeted caregiver support should be integrated into oncology care pathways.

CO-373: BARRIERS TO SCIENTIFIC RESEARCH AND PUBLICATION AMONG TUNISIAN GASTROENTEROLOGISTS

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Introduction: Scientific publishing is essential for evidence-based medicine and academic career progression. However, doctors in developing countries may face barriers to conducting and publishing research. This study aimed to investigate barriers to scientific research and publication among Tunisian gastroenterologists.

Methods: We conducted a cross-sectional survey of Tunisian gastroenterologists using a structured questionnaire assessing demographic characteristics, research experience, publication activity, perceived barriers, and preferred structural interventions. Barriers were rated on a 5-point Likert scale, with higher scores indicating greater difficulty.

Results: Among 54 respondents, 59.3% were women, 66.7% were trainees, and 74.1% had less than 5 years of professional experience. Overall, 22.2% had never published, 48.1% had published 1–5 articles, and 11.1% had published more than 10 articles.

The main perceived barriers were clinical workload limiting research time (median 4 [IQR, 4–5]; 77.8% rated $\geq 4/5$), publication fees (median 4 [IQR, 3–5]; 74.1%), lack of protected research time (median 4 [IQR, 3–5]; 66.7%), lack of research mentorship (median 4 [IQR, 3–4]; 66.7%), and insufficient institutional support (median 4 [IQR, 3–4]; 66.7%). Insufficient research funding was also frequently reported (median 4 [IQR, 3–5]; 59.3%). In contrast, technical aspects of submission were

less frequently perceived as major barriers, including online submission (11.1%), understanding author guidelines (18.5%), and responding to reviewers (18.5%).

Conclusion: Research and publication among Tunisian gastroenterologists appear predominantly constrained by structural rather than technical barriers. Protected research time, mentorship, institutional support, and improved access to research and publication funding should be prioritized.

CO-374: PROGRESS TOWARDS SUSTAINABLE DEVELOPMENT GOAL 3 IN TUNISIA: FIVE YEARS BEFORE THE 2030 AGENDA

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Introduction: The Sustainable Development Goals (SDGs) provide a global framework for sustainable development, with SDG 3 aiming to ensure healthy lives and promote well-being for all at all ages. Monitoring its indicators is essential to assess health system performance, identify inequalities, guide prevention strategies, and inform evidence-based health policies.

Aim: To assess Tunisia's progress toward SDG 3 between 2021 and 2025, highlighting achievements, persistent challenges, and implications for health policy.

Methods: A descriptive analysis of SDG 3 indicators was conducted using secondary data from national health statistics, official reports, and international estimates, complemented by a participatory consultation with key health-sector stakeholders. Temporal trends, progress towards targets, remaining gaps, and priority areas for action were assessed.

Results: Tunisia achieved notable progress in maternal and child health, with a maternal mortality ratio of 35.7 per 100,000 live births and an under-five mortality rate of 12 per 1,000 live births. Tuberculosis incidence continues to decline, while health emergency preparedness improved substantially, with International Health Regulations core capacity scores increasing from 66% in 2021 to 84% in 2025. However, important challenges remain, including rising road traffic mortality, the increasing burden of non-communicable diseases, adolescent smoking, and constraints related to health financing and workforce availability. Several digital and organizational innovations were implemented, including telemedicine services, national health information systems, digital pharmaceutical governance, and mobile screening initiatives targeting vulnerable populations.

Conclusion: Tunisia has made significant progress toward SDG 3, but accelerating prevention, strengthening the health workforce, ensuring sustainable financing, and expanding digital health remain essential to achieve the 2030 targets.

CO-375: DEMOGRAPHIC AGEING IN TUNISIA: TRENDS AND IMPLICATIONS FOR HEALTHCARE PLANNING

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Introduction: Population ageing is a major public health challenge due to its impact on healthcare needs, dependency,

and health service organization.

Aims: To describe demographic ageing trends in Tunisia between 2014 and 2024 and discuss their implications for health system planning and prevention policies.

Methods: A descriptive analysis was conducted using data from the 2014 and 2024 Tunisian Population and Housing Censuses published by the National Institute of Statistics. Population age structure, total fertility rate, ageing index, and old-age dependency ratio were compared between the two census rounds. Regional disparities were assessed by comparing the seven regions: Greater Tunis, North-East, North-West, Centre-East, Centre-West, South-East, and South-West.

Results: Between 2014 and 2024, Tunisia's population increased from 10.98 to 11.97 million inhabitants. The proportion of children aged 0–4 years declined from 9.0% to 5.9%, while the population aged ≥60 years increased from 12.0% to 16.9%. The total fertility rate reached 1.7 children per woman. The ageing index rose from 49% to 74%, and the old-age dependency ratio increased from 18% to 28%. Marked regional disparities were observed, with the North-West and Central-West regions showing the highest levels of ageing, whereas Greater Tunis and the North-East remained relatively younger.

Conclusion: Tunisia is experiencing a demographic transition toward an ageing population, with implications for healthcare needs and service delivery. Strengthening healthy ageing strategies, preventing dependency, expanding community-based care, and addressing regional inequalities can contribute to more efficient health planning and service delivery.

PSYCHIATRIE

CO-376: WHEN AI CITES: A PILOT STUDY OF PSYCHIATRIC REFERENCES ACROSS LARGE LANGUAGE MODELS.

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Introduction: Large language models (LLMs) are increasingly used to assist scientific writing and literature retrieval. However, inaccurate or irrelevant references may compromise scientific integrity, particularly in medical publishing.

This study aims to evaluate the existence, bibliographic accuracy, and relevance of psychiatric references generated by three commonly used LLMs: ChatGPT, Claude, and Gemini.

Methods: ChatGPT, Claude, and Gemini were each presented with five standardized psychiatry questions covering different topics, and then these LLMs were instructed to generate five references per question using an identical prompt. A total of 75 references were manually assessed for existence, bibliographic accuracy, and relevance to the proposed topic. References fulfilling all three criteria were considered valid. Descriptive statistics were used to compare reference reliability across models.

Results: Overall, 63/75 references (84.0%) were valid. Nine references (12.0%) were existent and bibliographically accurate but irrelevant, while three (4.0%) were existent and relevant but contained bibliographic citation errors. No completely fabricated or non-existent references were identified. ChatGPT generated 23/25 valid references (92.0%), with two irrelevant references and no bibliographic errors. Gemini generated 22/25 valid references (88.0%), with two irrelevant references and one bibliographic error. Claude generated 18/25 valid references (72.0%), with five irrelevant references and two bibliographic errors.

Conclusion: In this sample, three LLMs demonstrated a high rate of reference existence and overall bibliographic reliability,

with no fabricated references identified in this sample. Nevertheless, 16.0% of references presented either relevance or bibliographic problems. These findings emphasize that LLM-generated psychiatric references should be systematically verified by human reviewers before being incorporated into scientific manuscripts.

CO-377: HYPERTHYROIDISM IN OLDER ADULTS IN PRIMARY CARE: PREVALENCE AND IMPACT ON MENTAL HEALTH

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Introduction: Hyperthyroidism in older-adults is often characterized by atypical clinical-presentations, which may delay diagnosis and worsen prognosis. In our setting, data on its prevalence and clinical impact remain limited. This study aimed to estimate the prevalence of hyperthyroidism in older-adults and to analyze its association with mental-health status and control of chronic-diseases.

Methods: We conducted a cross-sectional-study including adults-aged ≥ 65 years followed for one or more chronic-conditions in a primary-care-center over a 3-month-period. Collected data included sociodemographic-characteristics, medical and surgical history, number of chronic-diseases and medications, cognitive status, treatment-adherence, level of control of chronic disease(s), and attitudes toward medications.

Results: Eighty-nine older adults were included, with a median age of 68years (IQR=[66–72]) and a female predominance (n=56;62.9%). Most were married(76.4%) and had children(91%). Smoking was reported in6.7% and surgical history in75.2%. Good physical and mental-health were reported by 31.4% and49.4%, respectively. The median number of chronic-diseases was 3(IQR=[2–4]) and of medications 4(IQR=[3–6]). The median number of hospitalizations related to chronic-diseases was 2(IQR=[1–2]). Disease acceptance was considered satisfactory in62.9%, disease control in50.5%, treatment adherence was good in83.1%, and attitudes toward medications were favorable in65.1%.

The prevalence of hyperthyroidism was7.8%(n=7). Compared with the remaining participants, older adults with hyperthyroidism were more likely to have poorer mental health(100%vs41.5%; $p=0.001$) while exhibiting better control of their chronic disease(s) (85.7%vs48.1%; $p=0.04$)

Conclusion: In this primary-care-population of older-adults, hyperthyroidism appears relatively frequent and is strongly associated with poorer-mental-health. These findings highlight the need to strengthen screening and monitoring of mental-health in hyperthyroid-older-adults.

CO-378: IMPACT OF EARLY-LIFE TRAUMA ON THE CLINICAL EXPRESSION OF BIPOLAR DISORDER

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Introduction: Bipolar disorder (BD) is a severe and chronic psychiatric disorder. Early-life trauma, including childhood abuse and neglect, may increase vulnerability to BD through long-lasting neurobiological and psychosocial effects.

Methods: An analytical study was conducted in 80 patients with BD. Univariate and multivariate analyses examined associations between childhood trauma, assessed using the Childhood Trauma Questionnaire (CTQ), and clinical, course-related, and sociodemographic variables. Cluster analysis was performed to identify homogeneous clinical profiles.

Results: Childhood trauma was associated with a more severe and unstable course, including a higher risk of unfavorable outcomes (RR = 1.71; 95% CI: 1.24–2.37; $p = 0.014$) and multiple relapses (RR = 2; 95% CI: 1.11–3.58; $p = 0.018$). Trauma exposure was also associated with occupational or academic instability, family instability, lack of family support, and disharmonious family relationships. It was further associated with increased somatic comorbidities and negative effects on educational and occupational status. No significant associations were found with treatment adherence, insight, suicidal ideation or attempts, rapid cycling, psychotic symptoms, or hospitalization type. Cluster analysis identified two clinical profiles: an early-onset, more severe profile with poorer prognosis, and a later-onset profile associated with a more favorable course.

Conclusion: Early-life trauma appears to be an important factor associated with greater severity and course instability in BD, as well as significant psychosocial impairment. Systematic trauma screening and targeted early interventions may help improve clinical management and identify patients at higher risk of unfavorable outcomes.

CO-379: IMPACT OF EARLY-LIFE TRAUMA ON IMPULSIVITY AND FUNCTIONING IN BIPOLAR DISORDER

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Introduction: Bipolar disorder (BD) is a severe chronic condition influenced by early environmental factors, particularly childhood trauma. These adverse experiences may lead to lasting changes affecting impulsivity and functioning.

Methods: A cross-sectional study was conducted over six months among 80 patients with BD diagnosed according to DSM-5 criteria. Patients were divided into two groups according to the presence (CTQ+) or absence (CTQ-) of childhood trauma assessed using the Childhood Trauma Questionnaire (CTQ). Impulsivity was evaluated using the Barratt Impulsiveness Scale (BIS-11), global functioning using the Global Assessment of Functioning (GAF) scale, and social functioning using the Social Functioning Questionnaire (SFQ).

Results: Early-life trauma was significantly associated with increased overall impulsivity, particularly emotional and physical abuse ($p = 0.002$), sexual abuse ($p = 0.04$), and physical neglect ($p = 0.015$). Motor impulsivity was strongly associated with total CTQ scores ($p = 0.004$) and emotional abuse ($p < 0.001$), while cognitive impulsivity was associated with physical and emotional neglect ($p = 0.01$). Non-planning impulsivity was significantly related to physical neglect ($p = 0.002$). Functional impairment was also significant: GAF scores were associated with total CTQ scores ($p < 0.001$) and all trauma dimensions ($p < 0.001$ –0.03). SFQ scores were associated with total CTQ scores

($p = 0.02$) and emotional, physical, and sexual abuse ($p < 0.001$), but not with physical neglect ($p = 0.31$).

Conclusion: Childhood trauma is associated with increased impulsivity and significant impairment in global and social functioning in patients with BD. Systematic trauma screening and integrative therapeutic approaches may help improve prognosis and quality of life.

CO-380: FACTORS PREDICTING CYBERCHONDRIA AMONG UNDERGRADUATE MEDICAL STUDENTS IN TUNISIA

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Introduction: Cyberchondria, characterized by excessive or repeated online health-information seeking that may exacerbate health-related anxiety, is an emerging concern among undergraduate medical students (UMS). However, the factors associated with this behavior remain insufficiently explored.

Our objectif was to identify factors independently associated with cyberchondria among undergraduate medical students in Tunisia.

Methods: We conducted a cross-sectional study among undergraduate medical students (UMS) at the Faculty of Medicine of Sousse, Tunisia, during the 2025–2026 academic year. Data were collected using a standardized, pre-tested, self-administered online questionnaire, which included the 12-item Cyberchondria Severity Scale (CSS-12), the Yale–Brown Obsessive–Compulsive Scale (Y-BOCS), the 7-item Generalized Anxiety Disorder scale (GAD-7), and questions assessing Internet use and online health-information seeking. Variables associated with cyberchondria in univariate analyses were entered into a multivariable linear regression model.

Results: A total of 350 UMS were enrolled. The mean CSS-12 score was 29.61 ± 10.25 , indicating a moderate level of cyberchondria. In the multivariable linear regression analysis, a history of pre-existing medical conditions ($\beta = 5.543$; 95% CI: 3.58–7.60; $p = 0.002$), psychoactive substance use ($\beta = 3.288$; 95% CI: 2.10–4.38; $p = 0.008$), longer Internet use ($\beta = 2.584$; 95% CI: 0.142–4.737; $p = 0.018$), obsessive-compulsive symptoms ($\beta = 2.273$; 95% CI: 1.148–4.744; $p = 0.030$), and anxiety disorders ($\beta = 4.588$; 95% CI: 2.420–6.728; $p < 0.001$) were independently associated with higher cyberchondria scores. The model explained 32.4% of the variance in cyberchondria scores (adjusted $R^2 = 0.324$).

Conclusion: Cyberchondria among UMS appears to be a multifactorial phenomenon. Screening vulnerable students and promoting responsible use of online health information may contribute to improving students' mental well-being.

CO-381: ADVERSE CHILDHOOD EXPERIENCES AND SOCIAL MEDIA ADDICTION: A CROSS-SECTIONAL STUDY

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Introduction: Social media has become an integral part of daily life, yet its excessive use can lead to addiction, especially among

individuals with increased vulnerability. Adverse childhood experiences significantly contribute to this vulnerability and may influence patterns of online behavior. This study aimed to investigate the association between social media addiction and adverse childhood experiences.

Methods: We conducted a cross-sectional, descriptive, and analytical study using an anonymous online questionnaire shared via a secure Google Forms link on social media platforms (Facebook and Instagram). Informed consent was obtained electronically before participation. The first section focused on collecting general data regarding socio-demographic information. Two validated psychometric scales were used: the Adverse Childhood Experiences Questionnaire (ACE-Q) and the Bergen Social Media Addiction Scale (BSMAS).

Results: We included 403 participants with a mean age of 29.0 years with ages ranging from 18 to 60 years. The sex ratio was 0.24.

Social media use began at a mean age of 16.23 ± 6.03 years, with notable intensity: nearly 40% spent more than 5 hours per day on these platforms. The most frequently used platforms were Facebook (95.3%), Instagram (92.6%), WhatsApp (82.4%), and TikTok (52.6%). Approximately 48.1% used more than four social media platforms simultaneously.

The mean BSMAS score was 17.28 ± 4.62 with a minimum of 6 and a maximum of 30, and problematic social media use was identified in 21.8% of the sample. Social media addiction was significantly associated with secondary education level ($p = 0.018$), sedentary lifestyle ($p = 0.01$), alcohol consumption ($p = 0.017$), limited social circle ($p = 0.001$), and family history of psychiatric disorders ($p = 0.001$).

Adverse childhood experiences were reported by 85.9% of participants, with 27% having been exposed to at least four events. Social media addiction was positively and significantly correlated with the ACE-Q score ($p < 0.001$; $R = 0.349$) as well as with all its dimensions, including different forms of maltreatment (physical, psychological, sexual, neglect) and adverse events (parental separation or divorce, exposure to addictive behaviors or psychiatric disorders within the household).

Conclusion: Adverse childhood experiences are significantly associated with social media addiction, suggesting that early-life adversity may represent an important vulnerability factor for problematic digital use. These findings highlight the need to consider childhood trauma and psychosocial vulnerability in the prevention, screening, and management of social media addiction. Further longitudinal studies are warranted to clarify the underlying mechanisms and causal pathways.

CO-382: SUICIDE STIGMA AND LITERACY AMONG MEDICAL STUDENTS IN TUNISIA

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Introduction: This cross-sectional study examines the level of suicide-related stigma and literacy among Tunisian medical students. Given that suicide remains a major global health issue and stigma is a key barrier to effective prevention, the study set out to assess students' knowledge and attitudes toward suicide and to identify the factors shaping them.

Objective: To evaluate suicide literacy and stigma levels among undergraduate medical students and to analyze the sociodemographic and academic factors associated with both.

Methods: The study surveyed 265 undergraduate medical students at the Faculty of Medicine of Sousse during the 2022–2023 academic year. Data were collected via a questionnaire covering sociodemographic characteristics along with two validated instruments: the Literacy of Suicide Scale (LOSS) and the Stigma of Suicide Scale (SOSS).

Results: The sample's mean age was 21.31 years (range 17–30), and 55% were female. A notable proportion reported personal or family exposure to psychiatric illness or suicide loss. Suicide literacy was generally low, with stronger knowledge of risk factors than of prevention or treatment. Male students and those with a family history of suicide showed higher literacy. Stigmatizing attitudes were common, particularly among male students and fifth-year students, while completion of a psychiatric internship or certificate was linked to significantly lower stigma. Correlation analyses identified associations between literacy, stigma, and demographic variables.

Conclusion: The study highlights low suicide literacy and high stigma among Tunisian medical students, especially men, and calls for curriculum-based education and targeted awareness campaigns to strengthen suicide prevention efforts

CO-383: EVALUATION OF THE IMPACT OF AN EDUCATIONAL INTERVENTION TO IMPROVE THE PERCEIVED READINESS, KNOWLEDGE

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Introduction: This study evaluates the impact of an educational intervention on healthcare professionals' perceived readiness, knowledge, and practices in managing intimate partner violence (IPV), a significant public health concern affecting victims' physical and mental health.

Objective: To assess the effect of an educational intervention—comprising expert-led sessions and workshops—on healthcare professionals' perceived readiness, expertise, and clinical practices when dealing with IPV victims.

Methods: The study included healthcare professionals likely to encounter IPV victims in their daily work. Outcomes were

measured using the validated, self-administered PERMIS questionnaire (Physician Readiness to Manage Intimate Partner Violence Survey), assessed before (T0) and after (T1) the intervention.

Results: Twenty-six professionals participated, with a mean age of 30; 61.5% had no prior IPV training. At baseline, perceived readiness correlated positively with training hours, legal knowledge, self-efficacy, and practice scores. Following the intervention, statistically significant improvements were observed in perceived preparation, perceived knowledge, and objective knowledge ($p < 10^{-3}$, $p = 0.004$, $p < 10^{-3}$ respectively), as well as self-efficacy ($p = 0.01$) and professional practice scores ($p = 0.041$). Non-adherence to screening dropped markedly, from 69.2% at T0 to 39.1% at T1 ($p = 0.007$). However, no significant gains were found in legal knowledge ($p = 0.1$), victim autonomy scores ($p = 0.9$), awareness of the alcohol/drug–IPV link ($p = 0.07$), or professional constraints ($p = 0.19$).

Conclusion: Effectively addressing IPV requires strengthened healthcare training, improved resources, organizational support, and broader prevention efforts through sex education and the promotion of gender equality.

RÉANIMATION MÉDICALE

CO-384: KNOWLEDGE GAPS IN ICU NURSES ON VENTILATOR WEANING: A MULTICENTRE SURVEY (TUNIS)

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Introduction: Mechanical ventilation (MV) is a cornerstone of intensive care, but prolonged use increases morbidity and mortality. Weaning from MV is a critical step, requiring careful assessment and collaboration. Nurses, as frontline caregivers, play a pivotal role, yet their knowledge and involvement remain underexplored in Tunisian ICUs.

Aim: to evaluate ICU nurses' knowledge, practices, and barriers in ventilator weaning across multiple hospitals in Tunis.

Methods: A cross-sectional survey was conducted from February to March, 2025, among 100 ICU nurses in five Tunis hospitals. A 24-item anonymous questionnaire assessed sociodemographics, workload, training, knowledge of weaning criteria, protocol availability, and nurse–physician collaboration. Data were analyzed using SPSS v27.

Results: The mean age was 30 years (± 5.8), with an average of 9 years in the profession and 6 years in ICU practice. Workload was high: 59% cared for > 2 beds. Only 35% reported specific undergraduate training and 23% in-service training. Knowledge gaps were evident: 34% knew different weaning modes, while $> 50\%$ failed to identify extubation-failure risk factors. Written protocols were scarce (8% of ICUs), and inconsistently applied. Despite this, 85% of nurses reported active participation in weaning, and 59% of decisions were collaborative with physicians.

Conclusion: ICU nurses in Tunis were highly engaged in ventilator weaning but faced deficits in training, protocol availability, and knowledge. Strengthening education, implementing standardized protocols, and fostering interprofessional collaboration are essential to improve patient outcomes.

CO-385: ACUTE HEART FAILURE IN THE INTENSIVE CARE UNIT: PROFILE, MANAGEMENT, AND PROGNOSTIC

FACTORS

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Introduction: This study describes the clinical profile of patients admitted to the intensive care unit (ICU) for acute heart failure (AHF), evaluates adherence to guidelines, and identifies prognostic factors associated with survival.

Methods: We conducted a retrospective two-year study (2023–2025) at Tabarka Regional Hospital. Survival was assessed using Kaplan–Meier analysis and the Log-rank test.

Results: Forty-three patients were included (mean age, 75 years; 53% women). Hypertension was the main comorbidity (44.2%), while respiratory infection was the leading precipitating factor (37.2%). The predominant hemodynamic profile was “wet-warm” (62.8%), and 74.2% had reduced left ventricular ejection fraction. Initial management was consistent with ESC recommendations for diuretics (95.3%) and non-invasive ventilation (27.9%). After stabilization, beta-blockers (81.5%) and mineralocorticoid receptor antagonists (77.8%) were frequently initiated, whereas SGLT2 inhibitors (31.8%) and sacubitril/valsartan (4.8%) remained underused. Estimated survival was 82% at day 7 and 73.8% at day 14; in-hospital mortality was 13.9%. Reduced survival was significantly associated with cardiogenic shock ($p<0.001$), chronic kidney disease ($p=0.001$), coronary artery disease ($p=0.001$), NYHA III–IV ($p=0.032$), systolic blood pressure <100 mmHg ($p=0.031$), qSOFA ≥ 2 ($p=0.03$), anemia ($p=0.007$), and NT-proBNP >7000 pg/mL ($p=0.011$).

Conclusion: AHF in the ICU remains associated with substantial mortality. Despite good adherence to initial therapy, SGLT2 inhibitors and sacubitril/valsartan remain underused. Systematic bedside echocardiography and optimization of guideline-directed quadruple therapy before discharge may improve management.

CO-386: PREOPERATIVE ULTRASOUND ASSESSMENT OF INFERIOR VENA CAVA AND SUBCLAVIAN VEIN COLLAPSIBILITY INDICES

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Introduction: Post-induction hypotension (PIH) is a frequent complication associated with increased postoperative morbidity and mortality. Preoperative volumetric assessment using point-of-care ultrasound represents a non-invasive approach to predict hemodynamic instability. This study aimed to compare the diagnostic performance of subclavian vein (SCV) collapsibility index (CI-SCV) with inferior vena cava (IVC) collapsibility index (CI-IVC) for predicting post-induction hypotension.

Methods: Prospective observational study of 53 patients

scheduled for general anesthesia. IVC and SCV diameters were measured during normal and deep inspiration, allowing calculation of collapsibility indices. Hemodynamic parameters and heart rate were recorded for 20 minutes following anesthetic induction.

Results: Both CI-VCI ($p=0.004$) and CI-SCV ($p=0.001$) during deep inspiration were significant predictors of PIH. Optimal thresholds were 14.83% for CI-IVC and 18.81% for CI-SCV. CI-IVC demonstrated superior diagnostic accuracy with sensitivity and specificity of 94% and 89%, respectively, compared to 79% and 68% for SCV (Figure1.). Measurement duration was significantly shorter for SCV ($p=0.001$).

Conclusion: CI-IVC during deep inspiration shows excellent diagnostic precision for predicting PIH. CI-SCV offers moderate diagnostic accuracy with faster acquisition time, representing a practical alternative when IVC assessment is challenging, particularly in obese patients or those with increased intra-abdominal pressure

CO-387: KNOWLEDGE AND PRACTICE OF MECHANICAL VENTILATION AMONG PARAMEDICAL STAFF IN EMERGENCY AND INTENSIVE

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Introduction: Mechanical ventilation (MV) is one of the most critical techniques in intensive care, used to support or replace spontaneous breathing during acute respiratory failure. Despite its vital role, inadequate management can lead to severe complications, and 55% of errors in intensive care are related to poor understanding of MV principles. Paramedical staff play a central role in daily monitoring and parameter adjustment; however, their level of competence remains uneven. This study aimed to assess the knowledge and practices of paramedical staff regarding MV in emergency and intensive care settings.

Methods: A descriptive cross-sectional study was conducted from November 2024 to January 2025 in the emergency departments and intensive care units of two university hospitals (CHU Sahloul and CHU Farhat Hached, Sousse). An exhaustive sampling approach was adopted. Data were collected using an anonymous, self-administered questionnaire validated by five physicians, covering five domains: general knowledge, ventilatory modes and parameters, spontaneous ventilation, invasive versus non-invasive ventilation, and monitoring. Data were analyzed using IBM SPSS v27.

Results: A total of 60 paramedical professionals were included (68% female; mean age 32.5 years). Half of the participants (50%) had less than five years of experience, and approximately two-thirds had received no specific MV training. General knowledge was satisfactory: 81.7% correctly identified the main purpose of MV and 83.3% recognized its key indications. However, knowledge gaps were identified in ventilatory modes (only 38.3% correctly defined ventilation modes) and parameter management: only 45% correctly defined tidal volume and 43.3% correctly identified spontaneous ventilation parameters. Monitoring competency was adequate in 71.7% of respondents (Table 1).

Conclusion: Knowledge of MV among paramedical staff is heterogeneous, with notable gaps in ventilatory modes and parameter adjustment. Targeted and continuous training programs are essential to ensure optimal management of mechanically ventilated patients in critical care settings.

CO-388: SERIOUS SUICIDE ATTEMPTS IN INTENSIVE CARE: ASSESSMENT OF PREDICTIVE FACTORS FOR RECURRENCE

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Introduction: Suicide attempts (SA) requiring intensive care unit (ICU) admission represent the most severe end of the suicidal behavior spectrum. Identifying predictors of recurrence is essential for targeted post-discharge psychiatric follow-up. This study aimed to determine the epidemiological, clinical, and outcome profile of patients admitted to the ICU for serious SA and to identify factors associated with suicidal recurrence.

Methods: A retrospective monocentric study was conducted at the medical ICU of Bizerte Hospital, Tunisia, over a 9-year period (April 2014–April 2023). All patients aged >12 years admitted for a serious SA were included. Collected parameters were epidemiological, clinical, and outcome-related. A comparative study using logistic regression was performed to identify factors associated with recurrence. Patients were divided into two groups: recidivists (Group 1) and first-time attempters (Group 2).

Results: Ninety-five patients were included (mean age 29 ± 13 years, 65% female). Psychiatric history was present in 43% of cases, with depression as the most common disorder (21%). Family conflict was the leading trigger (37%). The main toxic agents were drugs (49%), chloralose (34%), and organophosphates (8%). Coma (GCS ≤ 8) on admission occurred in 61% of patients; 62% required intubation. ICU mortality was 2%. Univariate analysis identified younger age, female sex, single/divorced status, lack of schooling, psychiatric history, schizophrenia, neuroleptic ingestion, chloralose ingestion, and family conflict as associated with recurrence. Multivariate logistic regression retained psychiatric history as the sole independent predictor of recurrence (adjusted OR = 7; 95% CI 2–23; $p < 10^{-3}$).

Conclusion: A personal history of psychiatric illness is an independent predictor of suicidal recurrence among patients admitted to the ICU for serious SA. Close post-discharge psychiatric follow-up and structured psychological care pathways for these patients are essential to prevent recurrence.

CO-389: EMERGENCY HEMODIALYSIS IN THE INTENSIVE CARE UNIT: AN EPIDEMIOLOGICAL, CLINICAL, AND PROGNOSTIC STUDY

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Introduction: Acute kidney injury (AKI) requiring urgent hemodialysis in the ICU carries high morbidity and mortality, with scarce data from North African ICUs. This study aimed to describe the epidemiological, clinical, and prognostic profile of patients receiving emergency hemodialysis in a medical ICU and identify independent predictors of mortality.

Methods: A prospective monocentric study was conducted over 12 months (July 2023–June 2024) in the 8-bed medical ICU of Habib Bougatfa University Hospital, Bizerte, Tunisia. All adult patients requiring at least one urgent hemodialysis session were included. Demographic, clinical, biological, and dialysis-related data were collected, and logistic regression analyses identified factors associated with hospital mortality.

Results: Of 206 patients admitted, 65 (31.5%) required emergency hemodialysis. Median age was 68 years; sex ratio (M/F) was 1.03. Hypertension (71%), diabetes (57%), and chronic kidney disease (51%) were predominant comorbidities. AKI was organic in 94% of cases, mainly septic (61%), with KDIGO stage III in 71%. Anuria was the leading dialysis indication (87.5%). Intracranial hypertension occurred in 40% of sessions. Hospital mortality was 73.8%, with 59% 3-month survival. Only 31% recovered diuresis, and 78.5% remained dialysis-dependent. Independent predictors of mortality were creatinine at AKI onset (OR 0.996; $p=0.003$), septic AKI (OR 6.584; $p=0.028$), and KDIGO stage III (OR 5.917; $p=0.035$).

Conclusion: Emergency hemodialysis in the ICU is associated with high mortality. Septic AKI, KDIGO stage III, and lower creatinine at onset are independent death predictors, useful for early risk stratification in critically ill patients requiring renal replacement therapy.

CO-390: THE ILLUSION OF COMPETENCE: PERCEIVED VERSUS ACTUAL CPR KNOWLEDGE IN PHYSICIANS AND PARAMEDICS

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Introduction: High-quality Cardiopulmonary Resuscitation (CPR) relies on the theoretical knowledge and confidence of the multidisciplinary intensive care team. However, a discrepancy often exists between self-assessed competence and actual objective knowledge, potentially impacting patient safety. This study aimed to evaluate and compare the self-perceived CPR competence versus actual theoretical knowledge between physicians and paramedical healthcare workers.

Methods: A cross-sectional study was conducted among healthcare professionals using a standardized questionnaire based on current CPR guidelines. Participants were categorized into two groups: Physicians and Paramedical staff. The survey assessed a self-evaluated "Perception" score of CPR skills and an objective "Final Score" measuring actual theoretical knowledge. A "Discordance" variable (Actual Score minus Perceived Score) was calculated to quantify the gap between actual knowledge and self-confidence.

Results: A total of 111 healthcare professionals were included

(mean age: 33.6 ± 9.2 years; 72.1% female), comprising 67 physicians (60.4%) and 44 paramedical staff (39.6%). Notably, 59.5% of the participants had never attended a certified training course.

Physicians reported slightly higher self-perceived competence compared to paramedical staff (6.79 ± 1.64 vs. 5.66 ± 2.05). The objective theoretical score was significantly higher among physicians (8.13 ± 1.51) than in the paramedical group (5.27 ± 2.00) ($p < 0.01$).

Physicians exhibited a positive discordance ($+1.34 \pm 1.75$), indicating a tendency to underestimate their actual theoretical knowledge. Conversely, paramedical staff showed a negative discordance (-0.38 ± 2.69), reflecting a slight overestimation of their abilities.

Despite the statistically significant difference in raw theoretical scores, multivariate analysis assessing the likelihood of achieving an adequate threshold for overall CPR proficiency revealed no significant difference between the two groups.

Conclusion: This study highlights distinct self-evaluation profiles within the ICU team: physicians tend to underestimate their higher baseline theoretical knowledge, while paramedical staff slightly overestimate theirs. However, despite physicians scoring higher on raw theoretical questions, both groups share a similar inability to consistently master the complete, practical CPR algorithm. This shared deficiency underscores that initial professional training is inadequate. Regular, multidisciplinary in situ simulation programs must be implemented to align perceived confidence with actual clinical readiness and improve overall team performance.

CO-391: ALPHACHLORALOSE POISONING IN INTENSIVE CARE: EPIDEMIOLOGICAL, CLINICAL, AND OUTCOME PROFILE

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Introduction: Acute, accidental, or intentional alphachloralose poisonings are common in Tunisia. They occur at a dose of 2 to 3 g in adults. The clinical presentation is dominated by neurological signs, usually combining motor hyperexcitability with characteristic myoclonus and a coma of variable depth depending on the ingested dose. The objective of this work is to describe the epidemiological, clinical, and outcome characteristics of patients poisoned by alphachloralose hospitalized in the Intensive Care Unit (ICU) of the Houcine Bouzaïen Hospital in Gafsa.

Methods: This is a retrospective study including all cases of alphachloralose poisoning admitted to the ICU between January 2022 and December 2024.

Results: We included 45 cases of acute alphachloralose poisoning. The mean age was 23 years (ranging from 14 to 51 years), with a clear female predominance (38 females / 7 males). The circumstances of poisoning involved self-harm in all cases. A psychiatric history was found in 3 patients (6.6%). Five patients had already experienced recurrent alphachloralose poisoning (11.1%). Neurological signs were the most frequent symptoms (86.6% of patients), and bronchial congestion was present in 31% of cases. Laboratory tests showed that 33.3% had leukocytosis, 20% had positive CRP, 11.1% presented with hypokalemia, 22.2% with hypoglycemia, and 17.7% had rhabdomyolysis. Treatment consisted of gastric lavage and

activated charcoal administration in 95.5% of patients, and mechanical ventilation (MV) in 100% of patients. Aspiration pneumonia occurred in 33.3% of cases, and 17.7% had documented VAP (ventilator-associated pneumonia). The final outcome was favorable in 97.7% of patients; a single patient died due to septic shock.

Conclusion: In Tunisia, and despite its frequency and the severity of the initial clinical presentation, acute chloralose poisoning maintains a favorable prognosis if managed early.

CO-392: EMPIRICAL ANTIBIOTIC THERAPY IN THE ICU: ADEQUACY RATE AND PRESCRIBING PATTERNS

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Introduction: In settings with a high multidrug resistance burden, achieving adequate empirical antibiotic coverage for critically ill patients is increasingly challenging and remains largely unevaluated at the local level. The aim of the study is to assess the adequacy rate and describe the prescribing patterns of empirical antibiotic therapy in a medical ICU.

Methods: A prospective observational study was conducted including ICU patients who received empirical antibiotic therapy. Adequacy was defined as demonstrated in vitro activity of at least one prescribed antibiotic against the identified pathogen. Clinical, microbiological, and prescribing data were collected prospectively.

Results: Prospective observational study of 30 consecutive ICU patients receiving empirical antibiotics. Adequacy was defined as in vitro activity of at least one prescribed antibiotic against the identified pathogen. Clinical, microbiological, and prescribing data were prospectively collected. Results. All 30 patients (mean age 52.2 ± 14.9 years; 86.7% male; SAPSII 35.2 ± 16.1 ; SOFA 6.5 ± 3.9) received empirical broad-spectrum therapy. No patient had received prior antibiotic therapy. Bacteriological documentation was obtained in 26/30 (86.7%), with polymicrobial infections in 33.3%. Primary infection sites were pulmonary (50.0%), urinary (33.3%), endovascular (10.0%), and neuro-meningeal (6.7%). Of 29 patients with available adequacy data, empirical therapy was adequate in 13 (44.8%) and inadequate in 16 (55.2%). Bitherapy was the predominant regimen (24/30, 80.0%), followed by monotherapy (13.3%) and tritherapy (6.7%). Imipenem was prescribed in 25/30 patients (83.3%), most frequently combined with colistin (18/30, 60.0%), constituting the dominant empirical strategy. Very broad-spectrum regimens incorporating colistin or tigecycline were used in 11/30 patients (36.7%).

Conclusion: Despite systematic carbapenem-based broad-spectrum prescribing, empirical antibiotic therapy was inadequate in more than half of ICU patients, underscoring the urgent need for local epidemiological surveillance to guide empirical prescribing.

CO-393: NOSOCOMIAL INFECTIONS IN A TUNISIAN ICU

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Introduction: Nosocomial infections represent a major burden

in intensive care units, particularly in settings with high multidrug resistance (MDR). Local microbiological surveillance is essential to guide infection control policies and empirical antibiotic strategies. Aim. To describe the incidence, site distribution, microbiology, and MDR burden of nosocomial infections in a Tunisian medical ICU over a two-month period.

Methods: Prospective analysis of microbiological isolations from a single ICU (January–February). Nosocomial infection was defined as a positive culture obtained at least 48 hours after ICU admission. Organism distribution, infection site, and MDR status were analyzed using descriptive statistics.

Results: Of 160 total isolations from 55 patients, 147 (91.9%) were nosocomial, involving 48 patients. January contributed 47 nosocomial isolations (20 patients) and February 100 (35 patients). The median time to nosocomial isolation was 7 days [IQR 4–14]. The respiratory tract was the leading site (80/147, 54.4%), followed by the bloodstream (30/147, 20.4%), urinary tract (17/147, 11.6%), cerebrospinal fluid (7/147, 4.8%), and catheter (7/147, 4.8%). The three dominant organisms were *Acinetobacter baumannii* (27.2%), *Klebsiella pneumoniae* (24.5%), and *Pseudomonas aeruginosa* (17.0%), collectively accounting for 68.7% of nosocomial isolations. MDR organisms were identified in 88 of 141 classified isolations (62.4%), with *Acinetobacter baumannii* ticarcilline-resistant representing 27.2%, carbapenem-resistant strains 21.8%, and ceftazidime-resistant *P. aeruginosa* 5.4%.

Conclusion: Our ICU bears a high nosocomial infection burden dominated by three MDR Gram-negative pathogens, with an overall MDR rate of 62.4%. These data underscore the urgent need for reinforced infection control and a structured antimicrobial stewardship program.

RHUMATOLOGIE

CO-394: THE ROLE OF TRACE ELEMENTS IN CARDIOVASCULAR RISK IN SPONDYLOARTHRITIS

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Introduction: Spondyloarthritis (SpA) is a chronic inflammatory rheumatic disease associated with increased cardiovascular (CV) risk. Trace elements such as copper (Cu), zinc (Zn), and selenium (Se) contribute to oxidative stress and immune homeostasis, potentially influencing this risk. This study assessed serum levels of these elements and their associations with cardiovascular risk in SpA patients.

Methods: This cross-sectional, single-center study included SpA patients diagnosed per the 2009 ASAS criteria. Serum Cu, Zn, and Se were measured, and the Cu/Zn ratio calculated. CV risk factors were recorded, and SCORE2 and QRISK3 scores computed.

Results: 101 patients were included (84 men, 17 women; mean age 40.5 ± 11.4 years; disease duration 5.7 ± 6.5 years). Smokers comprised 39%, and 8.9% were hypertensive. Mean BMI was 26.07 ± 4.46 kg/m² (17.8% obese); abdominal obesity occurred in 31.6%; metabolic syndrome in 8.9%. Mean SCORE2 was $9.7 \pm 5.7\%$ and QRISK3 $3.8 \pm 5.6\%$. Mean levels: Cu 20.03 ± 5.06 , Zn 11.75 ± 2.17 , Cu/Zn 1.78 ± 0.67 , Se 1.22 ± 0.15 µmol/L. Age correlated positively with Cu ($p=0.039$) and negatively with Se ($p=0.030$). Men had higher Cu, Cu/Zn, and Se, but lower Zn than women (all $p<0.05$). Abdominal obesity was linked to higher Cu/Zn ($p=0.041$), and Se correlated with cholesterol and LDL ($p<0.05$). No associations emerged with hypertension, smoking,

BMI, metabolic syndrome, or CV risk scores.

Conclusion: Serum trace elements were significantly associated with CV risk factors—age, sex, abdominal obesity, lipid profile—in SpA patients, suggesting a role beyond inflammation. Larger prospective studies are needed to validate them as CV biomarkers.

CO-395: LIFESTYLE AND QUALITY OF LIFE IN SPONDYLOARTHRITIS: BEYOND DISEASE ACTIVITY AND STRUCTURAL DAMAGE

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Introduction: Quality of life (QoL) is a major patient-reported outcome in spondyloarthritis (SpA). In addition to disease activity and functional impairment, modifiable lifestyle factors, including diet and physical activity, may influence patients' well-being. However, their contribution to QoL in SpA remains insufficiently characterized.

Objective: To identify clinical, biological, radiological, treatment-related, and lifestyle factors associated with QoL in patients with SpA, with particular emphasis on Mediterranean diet adherence and physical activity.

Methods: We conducted a cross-sectional study of 154 patients with SpA (120 men and 34 women; mean age 42.1 ± 11.7 years, range 21–78). QoL was assessed using the Ankylosing Spondylitis Quality of Life questionnaire (ASQoL). Disease activity, functional status, structural damage, and MRI inflammation were evaluated using BASDAI, ASDAS-CRP, ASDAS-ESR, BASFI, BASRI, mSASSS, and SPARCC scores. Lifestyle factors were assessed using the Chrono Med Diet Score (CMDS) and total physical activity in MET-minutes. Associations were analyzed using Spearman correlations and comparative tests.

Results: The mean ASQoL score was 7.61 ± 5.52 (range 0–18). Higher ASQoL scores, indicating poorer QoL, correlated with BASDAI ($r=0.501$, $p<0.001$), ASDAS-CRP ($r=0.403$, $p<0.001$), ASDAS-ESR ($r=0.304$, $p=0.004$), BASFI ($r=0.621$, $p<0.001$), and CRP ($r=0.226$, $p=0.033$). Conversely, better QoL correlated with greater Mediterranean diet adherence ($r=-0.337$, $p=0.001$) and higher physical activity ($r=-0.300$, $p=0.028$). No significant associations were found with structural or MRI scores, age, BMI, BASMI, ESR, vitamin D, or most clinical characteristics. ASQoL scores differed significantly according to anti-TNF therapy and NSAID use.

Conclusion: QoL impairment in SpA was mainly associated with disease activity and functional disability rather than structural damage. Mediterranean diet adherence and regular physical activity were associated with better QoL, supporting lifestyle counseling as an important adjunct to pharmacological management.

CO-396: CLINICAL CHARACTERISTICS OF DIFFICULT-TO-TREAT SPONDYLOARTHRITIS: A RETROSPECTIVE MONOCENTRIC STUDY

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Introduction: Difficult-to-treat spondyloarthritis (D2T-SpA) is defined by failure of ≥ 2 b/tsDMARDs with different mechanisms of action, or ≥ 3 b/tsDMARDs overall. This phenotype may be

associated with a substantial structural and functional burden, although its prevalence and clinical characteristics remain insufficiently studied.

Aim: To determine the prevalence of D2T-SpA and to compare its clinical, biological, and functional characteristics with those of non-D2T SpA.

Methods: Retrospective monocentric study of spondyloarthritis (SpA) patients' records collected between July 2024 and April 2025, classified as D2T or non-D2T. Quantitative variables were compared with the Mann-Whitney U test and qualitative variables with Fisher's exact test; $p < 0.05$ was considered statistically significant.

Results: Among 154 patients with SpA (120 men, 34 women; mean age 42.11 years), 11 (7.1%) met the criteria for D2T-SpA. Compared with non-D2T patients, those with D2T-SpA had a significantly longer disease duration (8.36 vs 6.01 years; $p = 0.049$), higher BASMI scores (5.00 ± 1.41 vs 2.64 ± 1.98 ; $p = 0.018$), and higher BASFI scores (6.26 ± 0.89 vs 4.01 ± 2.76 ; $p = 0.008$). Hip involvement was significantly more frequent in the D2T group (72.7% vs 24.1%; $p = 0.002$). Peripheral involvement showed a non-significant trend toward greater frequency in D2T-SpA (70.0% vs 39.2%; $p = 0.059$). No significant differences were observed in BMI, CRP, ESR, ASDAS-CRP, ASDAS-ESR, BASDAI, ASQoL, psoriasis, IBD, or enthesitis.

Conclusion: D2T-SpA affected 7.1% of patients and was associated with longer disease duration, greater spinal mobility impairment, more pronounced functional disability, and markedly more frequent hip involvement. The absence of significant differences in inflammatory markers and disease activity scores may reflect the effects of successive therapeutic adjustments. These findings suggest that structural and functional disease burden, particularly hip involvement, may contribute substantially to the D2T phenotype.

CO-397: WHICH AI CHATBOT SHOWS THE MOST EMPATHY IN RHEUMATOLOGY? A COMPARATIVE EVALUATION

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Introduction: Artificial intelligence is increasingly being integrated into medical practice and patient education. However, no comparative study to date has evaluated the performance of freely accessible AI models when confronted with common consultation complaints in rheumatology. This study aims to assess the perceived empathy of AI-generated responses across frequent clinical scenarios encountered in rheumatology practice.

Methods: Fifteen clinical scenarios representative of common rheumatology complaints (chronic pain, suspected rheumatoid arthritis, persistent fatigue, and diagnostic disclosure) were submitted to the free versions of ChatGPT, Gemini, and DeepSeek. The resulting 45 responses were independently evaluated by three raters (two physicians and one non-physician) using a 5-point Likert scale (1 = very low empathy, 5 = very high empathy).

Results: Forty-five responses were analyzed. Mean perceived empathy scores ranged from 3.87 ± 0.83 to 4.93 ± 0.26 , depending on the model. DeepSeek achieved the highest scores (up to 4.93 ± 0.26) with low dispersion, whereas ChatGPT showed somewhat greater variability (as low as 3.87 ± 0.83). Gemini demonstrated intermediate performance (≈ 4.33 – 4.40 ± 0.62). No response scored below 3/5, reflecting a distribution skewed toward high empathy ratings, and inter-model differences were modest in absolute terms.

Notably, inter-scenario variability was more pronounced than inter-model variability. Scenarios with high emotional load consistently received higher empathy scores, while situations with a predominantly functional or therapeutic focus showed greater variability across raters. Certain scenarios, particularly diagnostic disclosure, yielded comparable performance across all three models.

Overall, the three models demonstrated consistently high and reproducible levels of perceived empathy.

Conclusion: Freely accessible AI models are capable of generating responses perceived as highly empathetic across a range of rheumatology clinical scenarios. Larger-scale studies are needed to confirm and extend these preliminary observations.

CO-398: LINK BETWEEN SATISFACTION AND EMPATHY AMONG RHEUMATOLOGY RESIDENTS

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Introduction: Empathy is a cornerstone of medical training, yet its relationship with resident well-being remains poorly explored. The aim of our study is to assess the satisfaction of rheumatology residents and its impact on empathy.

Methods: This is a cross-sectional study including 32 rheumatology residents. Data were collected using a Google Forms questionnaire. Empathy was measured using the Jefferson Scale of Empathy (JSE). It comprises 20 items scored from 1 (strongly disagree) to 7 (strongly agree). The total score ranges from 20 to 140, with a higher score indicating greater empathy.

Results: Our population showed a clear female predominance (93%). Sixty percent of residents were in their first year of residency, 27% in their second year, and 13% in their fourth year. Rheumatology was the first choice of specialty in 60% of cases. The reasons motivating this choice were: work-life balance (93%), interest in rheumatic diseases (47%), career prospects of the specialty (40%), and the influence of a third party (40%). Supervision during training was rated as very satisfactory in 20% of cases, satisfactory in 53% of cases, and average in 27% of cases. Fifty-three percent of residents found the workload acceptable, while 47% found it high. Regarding future career plans, 46% were considering an academic hospital-based or private practice career, while 8% intended to work abroad. Eighty percent of residents were overall satisfied with rheumatology, and 80% reported they would choose it again.

Empathy assessment using the JSE score found a mean score of 80.21 ± 13.43 [37–93]. No statistically significant association was found between the JSE score and overall satisfaction, workload, or quality of training ($p > 0.05$).

Conclusion: Despite high professional satisfaction among residents, this satisfaction does not appear to influence their level of empathy. These two dimensions evolve independently, suggesting that workplace well-being alone is not sufficient to guarantee or strengthen residents' empathetic dispositions.

CO-399: DÉTERMINANTS DE L'AUTONOMIE THÉRAPEUTIQUE DANS L'OSTÉOPOROSE POST-MÉNOPAUSIQUE EN PREMIÈRE LIGNE

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Introduction: L'ostéoporose post-ménopausique (OPPM) demeure sous-diagnostiquée et sous-traitée, alors que le médecin de première ligne occupe une position pivot dans le parcours de soins. Le sentiment d'autonomie thérapeutique de ces praticiens, déterminant potentiel de l'initiation d'un traitement anti-ostéoporotique, reste peu documenté. L'objectif était de mesurer la proportion de médecins de première ligne se déclarant autonomes pour initier et suivre un traitement de l'OPPM et d'en identifier les facteurs associés.

Methods: Étude observationnelle transversale conduite auprès des médecins de première ligne (médecins de famille, médecins généralistes et résidents thésés) du gouvernorat de Mahdia, en Tunisie, par questionnaire « Connaissances-Attitudes-Pratiques » auto-administré combinant entretiens en présentiel et diffusion en ligne. Trois scores composites étaient calculés : connaissances /20, attitudes /24 et pratiques /27. L'autonomie thérapeutique était définie par une réponse « plutôt d'accord » ou « tout à fait d'accord » à l'item correspondant (échelle de Likert 0-4). Les comparaisons ont utilisé le test du Chi-deux et le test t de Student ou de Welch, complétés par une régression logistique multivariée ; le seuil de significativité était fixé à $p < 0,05$.

Results: Deux cents médecins ont été inclus (65,5 % de femmes ; âge moyen $33,8 \pm 8,8$ ans ; 82,5 % en secteur public ; aucune donnée manquante). Trente-huit médecins (19,0 %) se déclaraient autonomes, tandis que 52,5 % exprimaient un désaccord. En analyse bivariée, l'autonomie était associée au statut de résident thésé (38,0 % contre 12,7 % ; $p < 0,001$), au diplôme de gériatrie (32,8 % contre 12,0 % ; $p < 0,001$), au stage de rhumatologie (30,2 % contre 13,9 % ; $p = 0,011$) et à une file active d'au moins six nouvelles patientes par an (27,2 % contre 13,4 % ; $p = 0,025$). Elle n'était pas associée au score de connaissances (12,84 contre 13,35/20 ; $p = 0,39$) : les médecins ayant de bonnes connaissances ($\geq 15/20$) étaient même moins souvent autonomes (9,1 % contre 23,9 % ; $p = 0,021$). Après ajustement, persistaient le statut de résident thésé (OR 5,49 ; IC 95 % 2,32-13,01), le diplôme de gériatrie (OR 3,37 ; 1,47-7,70) et, en sens inverse, les bonnes connaissances (OR 0,34 ; 0,12-0,97). Les médecins autonomes prescrivaient plus souvent une ostéodensitométrie (78,9 % contre 45,7 % ; $p < 0,001$) et avaient un score de pratiques nettement supérieur (17,21 contre 13,84/27 ; $p < 0,001$).

Conclusion: L'autonomie thérapeutique, fortement corrélée aux pratiques déclarées, ne concerne qu'un médecin de première ligne sur cinq. Elle dépend de l'exposition clinique et de la formation post-graduée bien plus que du niveau de connaissances théoriques, dont l'association apparaît même inverse — possible reflet d'une meilleure perception de la complexité de la décision thérapeutique. Les interventions devraient donc viser la confiance décisionnelle (protocoles régionaux, seuils explicites d'initiation, supervision et avis spécialisé facilité) plutôt que le seul transfert de connaissances.

CO-400: C-REACTIVE PROTEIN-TO-ALBUMIN RATIO: A MARKER OF DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS

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Introduction: Rheumatoid arthritis (RA) is the most common chronic inflammatory rheumatic disease. Its course is characterized by persistent inflammation, which may lead to structural joint damage and functional disability. C-reactive

protein (CRP) and erythrocyte sedimentation rate (ESR) remain the standard biomarkers for assessing inflammatory disease activity; however, their interpretation may be affected by several confounding factors, including age, intercurrent infections, and comorbidities. This study aimed to evaluate the C-reactive protein-to-albumin ratio (CAR) as a biomarker of disease activity in patients with RA.

Methods: We conducted a retrospective study including patients with RA fulfilling the 2010 ACR/EULAR classification criteria. Demographic, clinical, and laboratory data were collected from patients' medical records. Statistical analyses were performed using SPSS software. A p -value < 0.05 was considered statistically significant.

Results: Seventy patients (55 women and 15 men) with RA were included. The mean age was 52.4 ± 12.2 years (range: 26–77 years). The mean age at disease onset was 45.9 ± 13.7 years (range: 19–76 years), and the mean disease duration was 8.6 ± 9.3 years (range: 0.2–37 years). Rheumatoid factor was positive in 61.4% of patients, while anti-cyclic citrullinated peptide (anti-CCP) antibodies were positive in 73%. Erosive disease was observed in 77% of patients, and secondary Sjögren's syndrome was present in 32%. The mean DAS28-ESR score was 3.92 ± 1.47 (range: 1.8–6.2), and 58% of patients had moderate-to-high disease activity (DAS28-ESR > 3.2).

Twenty-one patients (30%) were receiving biologic therapy, including anti-CD20 agents ($n = 12$), TNF inhibitors ($n = 6$), and IL-6 inhibitors ($n = 3$).

The mean CRP level was 20.7 ± 38.5 mg/L, the mean serum albumin level was 38.1 ± 4.4 g/L, and the mean CAR was 0.61 ± 1.23 .

CAR showed significant correlations with several disease activity parameters, including the number of nocturnal awakenings ($r = 0.384$, $p = 0.008$), patient global assessment (PGA) ($r = 0.357$, $p = 0.003$), beta-globulin levels ($r = 0.247$, $p = 0.048$), and DAS28-ESR ($r = 0.519$, $p = 0.002$).

Conclusion: Our findings support the potential value of the C-reactive protein-to-albumin ratio as a simple, inexpensive, and readily available biomarker of inflammatory disease activity in patients with RA. CAR was significantly correlated with clinical disease activity parameters and DAS28-ESR. Further studies are warranted to validate these findings.

CO-401: REMISSION UNDER METHOTREXATE MONOTHERAPY IN RHEUMATOID ARTHRITIS: FREQUENCY AND ASSOCIATED FACTORS

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Introduction: Treat-to-target in rheumatoid arthritis (RA) aims to achieve remission or low disease activity. Methotrexate (MTX) remains the cornerstone of first-line conventional synthetic disease-modifying antirheumatic drug therapy. However, real-world data on outcomes and factors associated with response to MTX monotherapy remain limited.

Objective: To assess the frequency of remission or low disease activity at 6 months in patients with RA treated with MTX monotherapy and identify associated factors.

Methods: We conducted a retrospective study of 70 patients with RA fulfilling the 2010 ACR/EULAR classification criteria and treated with MTX monotherapy. Clinical and biological data were collected. Disease activity was assessed using DAS28-ESR at baseline and 6 months. Remission was defined as DAS28-ESR

<2.6 and low disease activity as DAS28-ESR ≤ 3.2 . Associated factors were assessed using correlation analyses.

Results: Mean age was 52.4 ± 12.1 years, with female predominance (78.6%). Erosive disease was present in 77.1%. Rheumatoid factor and anti-cyclic citrullinated peptide antibodies were strongly positive in 61.4% and 73.0%, respectively. Antinuclear antibodies were positive in 45.7%, and secondary Sjögren's syndrome was present in 24.3%. Mean baseline DAS28-ESR was 3.92 ± 1.47 . At 6 months, 20 patients (28.6%) achieved remission and 26 (37.1%) achieved low disease activity without corticosteroid therapy. DAS28-ESR improvement ≥ 1.2 at 3 months was observed in 8 patients. DAS28-ESR ≤ 3.2 at 6 months was negatively correlated with sedentary lifestyle ($r = -0.288$, $p = 0.014$), secondary Sjögren's syndrome ($r = -0.263$, $p = 0.020$), baseline morning stiffness duration ($r = -0.290$, $p = 0.014$), and baseline tender and swollen joint counts ($r = -0.368$, $p = 0.030$).

Conclusion: MTX monotherapy achieved remission or low disease activity at 6 months in 65.7% of patients, highlighting the importance of early disease activity assessment to identify patients requiring treatment optimization.

CO-402: VARIATION OF RHEUMATOID ARTHRITIS ACTIVITY PARAMETERS ACCORDING TO HOMOCYSTEINE LEVELS: A CROSS-SECT

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Introduction: Hyperhomocysteinemia is implicated in oxidative stress and the regulation of pro-inflammatory cytokines, potentially contributing to systemic inflammation in rheumatoid arthritis (RA). Its impact on RA disease activity remains poorly characterized. This study aimed to investigate the relationship between homocysteine levels and RA activity indices.

Methods: We conducted a cross-sectional study including patients meeting the 2010 ACR/EULAR classification criteria for RA. Disease activity was assessed using DAS28, SDAI, and CDAI. The association between homocysteine levels and these indices was analyzed by linear regression.

Results: A total of 100 patients were included, predominantly women (73%), with a median age of 55 years [47–60] and median disease duration of 9 years [5–15]. Mean DAS28-ESR was 4.35 ± 1.44 , mean DAS28-CRP 3.89 ± 1.39 , median CDAI 15 [8–25], and median SDAI 26.5 [15–41]. Linear regression demonstrated that each 1 $\mu\text{mol/L}$ increase in homocysteine was significantly and independently associated with higher DAS28-CRP (+0.28), DAS28-ESR (+0.31), SDAI (+2.5), and CDAI (+1.26) ($p < 0.001$ for all).

Conclusion: These findings indicate a significant association between hyperhomocysteinemia and increased RA disease activity, supporting a potential pro-inflammatory role of homocysteine. Monitoring homocysteine levels may provide a relevant assessment tool and inform targeted therapeutic strategies.

CO-403: SOCIAL AND FUNCTIONAL DETERMINANTS OF QUALITY OF LIFE IN SPA

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Introduction: Emerging evidence indicates that social determinants of health may substantially influence outcomes in chronic inflammatory diseases. However, their contribution to health-related quality of life (HRQoL) in patients with spondyloarthritis (SpA) remains insufficiently explored.

Methods: We conducted a cross-sectional analysis of 100 patients with SpA. HRQoL was assessed using the EuroQol 5-Dimension 3-Level (EQ-5D-3L) questionnaire. Sociodemographic characteristics, disease-related features, functional status, physical activity, and treatment modalities were recorded. Multivariable analysis was performed to identify independent factors associated with HRQoL impairment.

Results: Lower educational attainment was independently associated with poorer HRQoL across all EQ-5D-3L dimensions. Functional disability, defined as a BASFI score $\geq 40\%$, emerged as a stronger predictor of HRQoL impairment than disease duration, radiographic structural damage, or the presence of extra-articular manifestations. Physical inactivity was additionally associated with greater HRQoL deterioration. Biologic therapy was associated with a trend toward better HRQoL; however, its potential beneficial effect did not fully mitigate the adverse impact of functional disability and socio-educational vulnerability.

Conclusion: HRQoL in SpA is influenced by a complex interplay of functional and social determinants, which may have a greater impact than conventional indicators of structural disease severity. These findings underscore the need for a multidimensional approach to SpA management that integrates disease control with functional rehabilitation, promotion of physical activity, and consideration of patients' socio-educational circumstances to improve HRQoL and promote equitable care.

CO-404: MULTISITE MUSCULOSKELETAL SYMPTOMS AMONG TUNISIAN TELEWORKERS

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Introduction: Telework has become an established work arrangement since the COVID-19 pandemic and may contribute to musculoskeletal disorders (MSDs). Identifying factors associated with multisite musculoskeletal symptoms (MMS) is essential for developing targeted preventive strategies adapted to telework settings. The aim of this study was to determine the prevalence of MSDs among teleworkers and to identify the associated factors to MMS.

Methods: A descriptive cross-sectional study was conducted among 104 active Tunisian teleworkers between September 2021 and July 2022, using an online survey. The Nordic Musculoskeletal Questionnaire was used to assess MSDs. MMS were defined as pain or discomfort reported in at least two body regions during the previous 12 months.

Results: The 104 participants had a mean age of 33.06 ± 7.64 years and a sex ratio of 0.667. Most were engineers (45.2%),

working an average of 29.14 hours per week remotely: 39.4% practiced full regular telework, 38.5% occasional telework, and 22.1% partial regular telework. MSDs were common, particularly affecting the back (75%), neck (62.5%), and shoulders (55.6%). MMS was reported by 55 participants (52.9%). Risk factors associated to MMS included a defined telework duration ($p=0.034$), job seniority ($p=0.035$) and lack of breaks ($p=0.007$), while telework modalities and daily duration showed no significant influence.

Conclusion: Multisite musculoskeletal symptoms were highly prevalent among Tunisian teleworkers, particularly among those with longer telework duration, greater job seniority, and insufficient breaks. These findings highlight the importance of occupational health interventions promoting appropriate work organization and regular breaks in telework settings.

CO-405: POLYARTICULAR ONSET AS A PROGNOSTIC FACTOR IN RHEUMATOID ARTHRITIS: A REAL-WORLD STUDY

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Introduction: Rheumatoid arthritis (RA) is a chronic inflammatory disease with heterogeneous clinical presentations and outcomes. The initial pattern of joint involvement may reflect differences in disease phenotype and subsequent structural and extra-articular burden. However, the clinical characteristics and early outcomes associated with oligoarticular versus polyarticular onset remain insufficiently characterized.

Objective: This study aims to compare the clinical, biological, structural, and early treatment outcomes of patients with RA according to their initial articular presentation.

Methods: We conducted a retrospective study including 7 patients with RA fulfilling the 2010 ACR/EULAR classification criteria and treated with methotrexate (MTX) monotherapy. Patients were classified according to their initial articular pattern as oligoarticular (2–4 joints) or polyarticular (≥ 5 joints) onset. Demographic, clinical, biological, and treatment-related data were collected. Groups were compared regarding joint deformities, ANA positivity, secondary Sjögren's syndrome, bone mineral density, hip involvement, and radiographic damage assessed by the Sharp score. Disease activity and early treatment outcomes were also evaluated.

Results: Seventy patients (55 women, 15 men) with a mean age of 52.4 ± 12.1 years were included. Fifty-eight patients (83%) had polyarticular and 12 (17%) oligoarticular onset. No significant differences were observed in sex, age at disease onset, or time to diagnosis. Polyarticular onset was significantly associated with joint deformities (24 vs. 2, $p=0.005$), ANA positivity (58 vs. 12, $p=0.04$), secondary Sjögren's syndrome (52 vs. 18, $p=0.031$), low bone mineral density (50 vs. 20, $p=0.016$), and hip involvement (52 vs. 18, $p=0.032$). Polyarticular onset correlated with higher DAS28-ESR after 3 months of MTX treatment ($r=0.250$, $p=0.048$) and greater progression of the Sharp score at 6 months ($r=0.382$, $p=0.002$).

Conclusion: Polyarticular onset was associated with a more severe RA phenotype, characterized by greater joint damage and extra-articular burden. Its association with higher disease activity and radiographic progression despite MTX monotherapy suggests that the initial articular pattern may have prognostic value and could help identify patients at higher risk of unfavorable outcomes.

CO-406: DIFFUSE INTERSTITIAL LUNG DISEASE IN RHEUMATOID ARTHRITIS: ASSOCIATED FACTORS

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Introduction: Diffuse interstitial lung disease (ILD) is a common extra-articular manifestation of rheumatoid arthritis (RA). It significantly impacts the prognosis of the disease and influences therapeutic management.

Our objective was to identify the factors associated with ILD in patients with RA.

Methods: This was a retrospective study including 128 patients with rheumatoid arthritis (RA) followed in the Rheumatology Department of the Main Military Teaching Hospital of Tunis over a 15-year period (2010–2024). Clinical, laboratory, radiological, and therapeutic data were collected.

Results: The mean age of the patients was 53.3 years [22–83], and the female-to-male sex ratio was 3.12.

Pulmonary involvement was observed in 21% of patients. Nine percent of patients were symptomatic, with cough (5.5%) and dyspnea (7%). ILD was the most frequent pulmonary manifestation in our series (14.8%), consisting of usual interstitial pneumonia (UIP) (9.4%), nonspecific interstitial pneumonia (NSIP) (4.7%), and organizing pneumonia (one patient). Five patients had progressed to pulmonary fibrosis (3.9%).

In our series, ILD was more frequent in older patients (>60 years) and in those with comorbidities, particularly diabetes mellitus and hypertension, with a statistically significant association ($p<0.05$). Male sex and smoking were not significant determinants of ILD occurrence in our series. No statistically significant association was found between ILD and RA disease activity or its seropositive, erosive, or deforming characteristics. The occurrence of ILD was associated with the presence of other extra-articular manifestations, particularly ocular involvement and rheumatoid nodules ($p<0.05$). ILD was also significantly associated with the presence of Sjögren's syndrome ($p<0.05$). No statistically significant association was found between ILD and the treatments used ($p>0.05$).

Conclusion: ILD significantly impacts the prognosis of RA, highlighting the need for early screening, particularly in older patients with cardiovascular or autoimmune comorbidities, especially Sjögren's syndrome.

CO-407: IMPACT OF OBESITY ON DISEASE ACTIVITY AND PROGRESSION OF RHEUMATOID ARTHRITIS

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Introduction: The increased mortality associated with rheumatoid arthritis (RA) is linked to cardiovascular risk, with obesity being one of its major contributing factors. The objective of our study was to investigate the impact of obesity on RA disease activity.

Methods: This was a retrospective descriptive study involving 128 patients with rheumatoid arthritis (RA) followed in the

Rheumatology Department of the Main Military Teaching Hospital of Tunis. Disease characteristics were recorded, and body mass index (BMI) was calculated for all patients.

Results: The mean age of our population was 53.3 years, with a marked female predominance (female-to-male sex ratio = 3.12). The mean BMI was 27.27 kg/m² [15.14–43.16]. Twenty-one percent of patients were obese and 39% were overweight. The comorbidities observed were hypertension (37.5%), dyslipidemia (40%), and diabetes mellitus (40.7%), with a statistically significant association between BMI and diabetes ($p < 0.05$).

RA was seropositive in 84% of cases, erosive in 66.7%, and deforming in 65.2%. A statistically significant association was found between BMI and seropositivity for immunological markers ($p < 0.05$).

The disease was active in 66.7% of patients, with no statistically significant association with BMI.

Extra-articular manifestations were present in 59.3% of patients, including cardiac involvement (7.4%), pulmonary involvement (14.8%), rheumatoid nodules (14.8%), and osteoporosis (16.7%). A statistically significant association was observed between BMI and the occurrence of extra-articular manifestations, particularly rheumatoid nodules and cardiac manifestations ($p < 0.05$).

Regarding treatment, all patients received methotrexate, corticosteroid therapy was prescribed in 88.9% of patients, and biologic therapy was indicated in 51.9%. However, biologic therapy was more frequently used in patients with a higher BMI, with a statistically significant association ($p = 0.007$).

Conclusion: Obesity is one of the main factors contributing to cardiovascular risk in patients with RA. It is associated with a high burden of comorbidities and increased mortality. Therefore, optimal lifestyle and dietary management is essential.

CO-408: DIFFICULT-TO-TREAT RHEUMATOID ARTHRITIS: SYSTEMIC, STRUCTURAL, AND FUNCTIONAL BURDEN

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Introduction: Beyond joint inflammation, difficult-to-treat rheumatoid arthritis (D2T RA) is associated with multisystem involvement and severe structural damage, which substantially contribute to disability and impaired quality of life.

Objective: To describe extra-articular manifestations, structural damage, and the overall disease burden in a population of patients with difficult-to-treat RA

Methods: A retrospective descriptive study was conducted, including patients who met the EULAR criteria for difficult-to-treat rheumatoid arthritis ($n = 12$) within a cohort of 284 patients with rheumatoid arthritis. The data analyzed included extra-articular manifestations at diagnosis and during follow-up, radiographic findings, bone involvement, joint deformities, functional impairment, and the use of assistive devices.

Results: Extra-articular manifestations were present in 36% of patients at diagnosis and reached 100% at the time of inclusion. Bone involvement was the most frequent (92%), particularly osteoporosis (67%). Other manifestations included dermatological (42%), ocular (33%), pleuropulmonary (33%), and cardiovascular (25%) involvement.

Structural damage was severe and widespread: erosive disease was observed in 92% of patients, joint deformities in 75%, and radiographic progression in 50%. Spinal and large-joint involvement contributed to significant functional limitation.

The functional burden was substantial, with a mean HAQ score of 1.35 ± 0.69 . The use of assistive devices was reported in 42% of patients, and occupational disability was frequent, with 75% of patients being unemployed. Persistent disease activity further increased disability, with a mean DAS28-CRP score of 4.68 ± 1.45 .

Conclusion: Difficult-to-treat rheumatoid arthritis is a systemic disease that can progress to severe structural damage and significant functional disability. Its management should go beyond controlling inflammation and include the management of extra-articular manifestations, structural damage, and their functional and social consequences.

SEXOLOGIE

CO-409: SEXUAL VIOLENCE AGAINST TUNISIAN ADOLESCENTS: EPIDEMIOLOGY, CHARACTERISTICS AND CONSEQUENCES

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Introduction: Sexual violence against adolescents is a major public-health and human-rights concern, with potentially lasting psychological, sexual and social consequences. In Tunisia, evidence remains fragmented across clinical, forensic and child-protection settings, while stigma and underreporting may obscure the magnitude of the problem.

We Aim To synthesize the available Tunisian evidence on sexual violence among adolescents, focusing on its epidemiological characteristics, forms of aggression, perpetrator profiles, associated factors and psychological and social consequences.

Methods: A narrative review of Tunisian literature was conducted using the studies and national sources identified in the reviewed documents. Evidence from peer-reviewed studies, clinical and forensic reports, and relevant national child-protection sources was examined. Particular attention was given to adolescent-specific data, while studies including broader pediatric populations were interpreted separately.

Results: The available literature indicates that sexual violence affects predominantly adolescent girls and is frequently perpetrated by individuals known to the victim. Reported forms include sexual touching, attempted or completed penetration, coercion and technology-facilitated sexual exploitation. Several Tunisian studies describe substantial psychological consequences, including post-traumatic symptoms, anxiety, depressive symptoms, sleep disturbances and difficulties in school and social functioning. However, the evidence is heterogeneous, with marked differences in populations, definitions, recruitment settings and outcome assessment. Adolescent-specific epidemiological data remain limited, and available figures likely underestimate the true burden because of delayed disclosure, stigma and barriers to reporting.

Conclusion: Sexual violence against adolescents represents an important but insufficiently characterized health problem in Tunisia. Strengthening standardized surveillance, early identification, trauma-informed clinical care and coordinated medical, psychological, forensic and child-protection services is essential. Further multicenter research using standardized definitions and validated instruments is needed to establish the national burden and guide prevention strategies.

MÉDECINE DENTAIRE 2

CO-410: CLINICAL FEATURES OF CERVICO-FACIAL CELLULITIS OF DENTAL ORIGIN: A RETROSPECTIVE STUDY

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Introduction: Odontogenic cervicofacial cellulitis OCC are polymicrobial infections that can lead to severe local and systemic complications. Their management relies on early diagnosis and appropriate medical and surgical treatment. Aim: This study aimed to analyze the clinical and therapeutic data of patients managed for this condition.

Methods: This is a retrospective study conducted over a period of 11 years, from 2013 to 2023, carried out in the ENT department of the regional hospital of Sidi Bouzid, including all patients managed for odontogenic cervicofacial cellulitis and hospitalized with the diffuse form. Epidemiological, clinical, and paramedical data were collected from patients' records in the same department and the laboratory of biology. Ethical approval was obtained from the ethics committee of the dental medicine faculty of Monastir. A statistical analysis was performed using Student's t-test, Pearson's chi-square test, and the Wilcoxon-Mann-Whitney test in IBM SPSS Statistics software, version 20.0.

Results: A total of 126 patients' records were analyzed. The median age of patients was 26.5 years IQR [14.5; 44.25] with a sex ratio M/W equal to 0.7. Swelling was the pathognomonic clinical sign observed in all patients. Fever was present in 67%, trismus in 48%, dysphagia in 15% and dyspnea in 5% of cases. Non-steroidal anti-inflammatory drugs had been taken prior to consultation in 34.1% of cases. The location of the lesion was mainly submandibular (47%). The median length of hospital stay was 8 days IQR [6; 8]). All patients received appropriate antibiotic therapy, combined with medical and surgical management in cases of severe forms. Several risk factors for the OCC occurrence were examined: Nonsteroidal anti-inflammatory drug (NSAIDs) use, diabetes, alcohol consumption, smoking, and self-medication. Only NSAIDs use was significantly associated with the disease. Subjects who took NSAIDs had a significantly longer time to seek medical care. They have a 20% higher chance of experiencing a delayed diagnosis.

Conclusion: Patients with OCC presented distinct clinical and biological profiles with a relatively long evolution. This highlights the need for a rapid and adequate management of OCC and special vigilance regarding NSAIDs prescription.

CO-411: CODEINE PRESCRIBING PRACTICES AMONG TUNISIAN DENTISTS: A CROSS-SECTIONAL SURVEY

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Introduction: Appropriate analgesic prescribing is essential for the safe management of acute dental pain. Although nonsteroidal anti-inflammatory drugs are recommended as first-line therapy, codeine remains widely used despite adverse effects, variable metabolism, and dependence-related concerns.

Aim: To assess codeine prescribing practices, clinical indications, and factors associated with its use among practicing dentists in Tunisia.

Methods: A cross-sectional survey was conducted over five months using an anonymous 19-item online questionnaire distributed to Tunisian dentists. Information regarding demographic characteristics, practice setting, specialty, indications for codeine prescription, drug combinations, and discontinuation of use was collected. Associations between prescribing practices and professional characteristics were assessed using the Chi-square test, with $p \leq 0.05$ considered statistically significant.

Results: Among 267 respondents, 216 (81.0%) were private practitioners. Overall, 152 dentists (56.9%) reported having prescribed codeine. Combination therapy was used by 77.7% of prescribers, mainly with paracetamol. Codeine prescribing varied significantly according to practice setting ($p < 0.001$), with higher use among private practitioners (121/216) than hospital-based dentists (17/37) and university faculty (8/14). Specialty was also significantly associated with prescribing ($p = 0.004$). Among dentists who had prescribed codeine, 74/152 (48.7%) reported subsequently discontinuing its use based on their clinical experience.

Conclusion: Codeine remains frequently prescribed by Tunisian dentists, particularly in private practice. These findings highlight the need for evidence-based prescribing guidance and continuing education to promote safer and more appropriate management of acute dental pain.

CO-412: REGENERATIVE ENDODONTIC PROCEDURES IN THE MANAGEMENT OF HORIZONTAL ROOT FRACTURES: A SCOPING REVIEW

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Introduction: Conventional management of horizontal root fractures (HRFs) (repositioning, flexible splinting and monitoring) preserves pulp vitality in most cases, yet a significant minority progresses to pulp necrosis, resorption or ankylosis. Regenerative endodontic procedures (REPs) have transformed the treatment of necrotic immature teeth, but their application in teeth with HRFs remains poorly characterised. The aim of this scoping review was to synthesise the available clinical evidence on the use of REPs in HRF management, to describe the protocols employed, and to identify knowledge gaps requiring future investigation.

Methods: This scoping review followed the Joanna Briggs Institute methodology and the PRISMA extension for scoping reviews. A systematic search of PubMed/MEDLINE, Scopus, Web of Science, Cochrane Library, LILACS and Google Scholar

was performed without date restriction. Eligibility criteria were defined using the PCC (Population–Concept–Context) framework: permanent teeth with HRFs (population), REPs including revascularisation and revitalisation (concept), and clinical reports of any design (context). Two independent reviewers conducted screening, data extraction and charting.

Results: Six case reports met the inclusion criteria, documenting REP outcomes in eight maxillary central incisors in patients aged 9–18 years. Follow-up ranged from 12 to 99 months. All treated teeth remained functional and asymptomatic. Blood-clot induction was the universal scaffold. Intracanal medicaments comprised calcium hydroxide ($n=3$), triple antibiotic paste ($n=2$) and a double antibiotic paste ($n=1$). Coronal barriers included mineral trioxide aggregate ($n=4$) and bioceramic materials ($n=2$). Radiographic healing patterns included hard-tissue interposition ($n=2$), connective-tissue interposition ($n=3$) and combined bone–connective-tissue interposition ($n=1$). Continued root development was documented in all three immature teeth. Pulp sensibility returned partially in two cases.

Conclusion: Despite evidence confined to case reports, REPs appear to offer clinically meaningful outcomes in select HRF cases, particularly in young patients with immature teeth, vital apical fragments and necrotic coronal pulps. The biological rationale is compelling, yet standardised protocols, validated outcome criteria and prospective comparative studies are needed.

CO-413: EVALUATING DENTAL INTERNS' READINESS FOR PRIVATE PRACTICE

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Introduction: The shift to private practice requires clinical and entrepreneurial skills that are essential for managing a dental practice. But after graduation, dental interns might not be ready for this autonomy. In order to modify their training to meet the demands of the profession, this ambiguity calls for an evaluation of their level of readiness.

Aim: To assess the perceived readiness of sixth-year dental students for private practice and identify areas in which their undergraduate training may be insufficient.

Methods: A descriptive cross-sectional study was conducted among sixth-year dental students at the Faculty of Dental Medicine of Monastir during the 2023–2024 academic year. Data were collected using a 22-item questionnaire developed in French and distributed both online through a dedicated Facebook group and in printed form across the departments of the Monastir Dental Clinic. The questionnaire assessed participants' perceived clinical competence and preparedness for the administrative and managerial aspects of private practice.

Results: Among 195 enrolled interns, 150 valid responses were analyzed (response rate: 76.9%). Clinical practice, either as operator or observer, was reported by 97.3% of participants, with the same proportion reporting systematic supervision. High levels of autonomy were reported for common procedures, including simple tooth extraction (99.3%), direct restorative treatment (96.7%), preventive measures for caries and periodontal disease (95.3%), and endodontic treatment (93.3%). However, autonomy was substantially lower for

indirect restorative procedures, with 43.3% unable to perform them independently and 48.0% reporting no prior opportunity to perform them. Despite this relatively high perceived clinical autonomy, only 10.7% of participants considered themselves adequately prepared for private practice, whereas 89.3% did not. Furthermore, 64.0% had no clear plan regarding their future practice location, while 70.6% expressed a preference for private practice, predominantly as solo practitioners (82.1%).

Conclusion: Although dental interns demonstrated a satisfactory level of perceived clinical confidence, important deficiencies remain in administrative and practice-management skills. These findings highlight the need to strengthen undergraduate dental education through structured training in practice management, administration, and professional transition to better prepare future dentists for private practice.

CO-414: DIAGNOSTIC CONTRIBUTION OF MINOR SALIVARY GLANDS BIOPSY IN SYSTEMIC DISEASES

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Introduction: The biopsy of the minor salivary glands is a key criterion for diagnosing Sjögren's syndrome, with reported sensitivity usually in the mid-60s to mid-90s and high specificity. It can also reveal other systemic diseases such as sarcoidosis or amyloidosis. The aim of this study is to assess the diagnostic yield and contribution of minor salivary gland biopsy among patients with some autoimmune diseases (Sjögren's syndrome, sarcoidosis, amyloidosis).

Methods: A retrospective, analytic study conducted in the department of internal medicine in the Military Hospital of Tunis. It included all patients who underwent a biopsy between January and December 2025. Demographic, clinical, laboratory, and histopathological data were collected from patients' records using a special collection form. Inclusion criteria: a usable biopsy with available data. Exclusion criteria: incomplete records or absence of a biopsy. Histopathological analysis involves examining focal lymphocytosis, the Chisholm-Mason grade, and detecting lymphocytic infiltrates, granulomas, or amyloid deposits. The study was approved by the ethics committee of the Tunis Military Hospital. Statistical analysis was performed in the SPSS v.20.

Results: In total, 34 patients' records were collected for whom 34 biopsies were performed. Among patients, 82.4% were females. Patients' median age at the biopsy was 53 y.o. (IQR: 51.75, 59.25). Patients were consulting or hospitalized in the department of internal medicine (29.4%) or referred from other departments such as pneumology (26.5%), ophthalmology (17.5%), rheumatology (8.8%), etc. Final diagnoses retained were mainly Sjögren's syndrome (35.3%), sarcoidosis (17.6%), dry eye syndrome (8.8%), systemic lupus erythematosus (8.8%), Sjögren's syndrome associated with sarcoidosis (2.9%), and amyloidosis (2.9%). Histopathologic findings revealed an absence of inflammatory infiltrate in 29.4% of the cases; a focus score of Chisholm-Mason grade IV in 32.4%; grade III in 14.7%; grade II in 14.7%; and grade I in 8.8% of the cases. Several clinical manifestations were reported: xerostomia (70.6%), xerophthalmia (70.6%), arthralgia (32.4%), joint manifestations (29.4%), neuropsychiatric manifestations (17.6%), pneumo-pulmonary manifestations (17.6%), cutaneous manifestations (5.9%), renal manifestations (5.9%), and cardiac manifestations (2.9%). A statistically significant association was demonstrated between the focus score of Chisholm-Mason and xerostomia and xerophthalmia.

Conclusion: Pathological characterization of salivary glands provides information that goes beyond a mere diagnostic or classification utility, providing insights for a stratification of disease severity and for predicting systemic manifestations. However, because autoimmune diseases progress slowly, a biopsy may sometimes come back negative. Thus, longitudinal follow-up with a combination of histological findings and clinical and biologic data is essential, and in some cases, further biopsies may be needed.

CO-415: OCCLUSAL CONTACT AREA AND ANGLE CLASSIFICATION: A CROSS-SECTIONAL STUDY AMONG THE TUNISIAN POPULATION

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Introduction: Occlusal contact area plays a key role in the proper functioning of the stomatognathic system. However, the extent to which it differs across different malocclusion types remains a topic of clinical interest.

Methods: A descriptive cross-sectional study was conducted among Tunisian adults with Angle Class I occlusion. Clinical examination was performed to confirm the occlusal classification and assess relevant occlusal characteristics. Occlusal contact areas were recorded using modeling wax during maximum intercuspation. The recorded wax specimens were analyzed using image-processing procedures and MATLAB software to quantify the contact area. Data were analyzed using SPSS software. Level of significance was set at 5 %.

Results: The mean occlusal contact area was 49.91 ± 21.47 mm². The difference according to the sex, the laterality type and the morphological profile were statistically not significant.

Conclusion: Angle Class I occlusion is characterized by a measurable occlusal contact area that can be quantitatively assessed using interocclusal wax records and digital image analysis. The descriptive assessment provides baseline data on occlusal contact area in Angle Class I subjects and may contribute to a better understanding of functional occlusion. Further studies using standardized digital methods and larger samples are recommended to establish normative reference values.

CO-416: EFFICIENCY OF PERIPHERAL ALCOHOL INJECTION IN THE TREATMENT OF TRIGEMINAL NEURALGIA: A SYSTEMATIC REVIEW

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Introduction: Trigeminal neuralgia (TN) is a debilitating chronic neuropathic pain disorder characterized by recurrent episodes of severe, electric shock-like facial pain. While pharmacological therapy with carbamazepine remains the first-line treatment, a substantial proportion of patients become refractory to medication or develop intolerable adverse effects, necessitating interventional approaches. Peripheral alcohol injection, a

minimally invasive neurolytic technique targeting the affected trigeminal branches, has been practiced for decades. However, its effectiveness and safety profile remain insufficiently synthesized in contemporary literature.

Methods: A systematic review was conducted in accordance with the PRISMA 2020 guidelines. A comprehensive search of Medline/PubMed, Scopus, and Google Scholar was performed from database inception to August 2025, using the Boolean equation: ("trigeminal neuralgia" OR "tic douloureux") AND ("alcohol injection" OR "alcohol neurolysis" OR "chemical neurolysis"). Studies were included if they reported outcomes of peripheral alcohol injection in adult patients diagnosed with classical or idiopathic TN according to IHS/ICHD criteria. Methodological quality was assessed using the Joanna Briggs Institute (JBI) critical appraisal tools. Twelve studies were ultimately selected for qualitative synthesis.

Results: The twelve included studies, published between 1999 and 2025, comprised nine case series, two comparative studies, and one randomized controlled trial, with a total of 1,423 patients across ten countries. Immediate pain relief was achieved in 70–100% of patients across all cohorts. The mean duration of analgesia ranged from 11 months for distal intraoral approaches to up to 67.9 months for proximal skull-exit techniques. Repeated injections maintained pain control in most patients, although a progressive reduction in efficacy was observed with subsequent administrations, attributed to perineural fibrosis. The overall complication rate was low, with predominantly transient adverse effects including local swelling, trismus, and paresthesia. Serious adverse events such as anesthesia dolorosa or corneal injury were not reported in any included study. Methodological quality was rated as low to moderate risk of bias across the included studies.

Conclusion: Peripheral alcohol injection remains a relevant, evidence-supported, and practically accessible therapeutic option in the contemporary management algorithm of trigeminal neuralgia. It effectively bridges the gap between pharmacological and neurosurgical treatment, offering meaningful pain relief with an acceptable safety profile. Adherence to standardized technical protocols including strict volume limitation, mandatory negative aspiration, and accurate anatomical localization is essential to optimize outcomes and minimize complications. Future research should prioritize prospective multicenter trials with standardized outcome measures to consolidate the evidence base for this technique.

CO-417: DIAGNOSTIC PERFORMANCE OF CHATGPT PLUS (GPT-5.6 SOL) IN ORAL PIGMENTED LESIONS

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Introduction: Oral pigmented lesions range from benign conditions to potentially life-threatening malignancies. Their diagnosis can be challenging for general dental practitioners, particularly when deciding whether specialist referral is necessary. This may result in unnecessary referrals or delayed recognition of serious disease. This study assessed the diagnostic performance of ChatGPT Plus (GPT-5.6) across oral pigmented lesions of increasing complexity and evaluated the quality of its clinical reasoning.

Methods: Ten text-based clinical scenarios were developed and graded for diagnostic difficulty by two experienced oral surgeons and validated by a senior expert. Each scenario was

submitted once to ChatGPT Plus using a standardized English-language prompt. Responses were assessed using a predefined 10-point scale covering six domains: Top-1 diagnostic accuracy, Top-3 differential diagnosis, malignancy suspicion, management appropriateness, justification quality, and differential diagnosis completeness

Results: Top-1 diagnostic accuracy was 100% for simple and moderate cases but fell to 33.3% for complex cases ($p=0.033$). The mean global score decreased from 10.0/10 in simple cases to 9.0/10 in moderate and 7.7/10 in complex cases. Despite the lower diagnostic accuracy in complex cases, management recommendations were appropriate in all cases. Justification quality was significantly correlated with the global score ($\rho=0.759$; $p=0.011$).

Conclusion: ChatGPT Plus performed well in simple and moderate oral pigmented lesions, but its diagnostic accuracy decreased markedly in complex cases. While its management recommendations remained appropriate, specialist assessment is still essential for complex or atypical lesions. AI could nevertheless be useful as an adjunct to clinical reasoning and referral decisions.

CO-418: ORAL MANIFESTATIONS IN DERMATOLOGY PATIENTS: A CROSS SECTIONNAL STUDY

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Introduction: Dermatological diseases include a wide range of conditions that frequently affect mucosal tissues, particularly in the oral cavity. This article investigates the prevalence and characteristics of oral manifestations in patients with dermatological diseases, highlighting the important overlap between dermatology and oral medicine.

Methods: A cross-sectional, descriptive, and retrospective study was conducted at the Stomatology Department of Charles Nicole Hospital between December 2021 and April 2024. Out of 4,405 medical files, 47 patients meeting specific inclusion criteria were analyzed.

Results: The study showed a female predominance (68%) with a mean age of 49 ± 17.5 years, and a higher incidence among adults over 31 years. Oral manifestations were found in 57% of patients with dermatological diseases. Lichen planus was the most frequent condition (21.3%), followed by Stevens-Johnson syndrome and mucous membrane pemphigoid. These manifestations, which often precede skin lesions, highlight the diagnostic importance of oral examination in dermatological disorders. The buccal mucosa was the most commonly affected site, with a statistically significant association between oral manifestations and buccal mucosa ($p < 0.001$). varied from ulcers and erosions to desquamative gingivitis and mucosal atrophy. (Pearson's chi-square test)

Conclusion: This article enhances the understanding of the relationship between dermatological diseases and oral health. It emphasizes the need for multidisciplinary collaboration between dentists and dermatologists to improve diagnosis and patient care. Greater awareness among dental professionals of the oral signs of dermatological diseases is crucial for early identification and appropriate management.

ANESTHÉSIE RÉANIMATION

P-01: VIDEO VERSUS WRITTEN PRE-ANAESTHETIC INFORMATION BEFORE CAESAREAN SECTION: A RANDOMISED TRIAL

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Introduction: Anxiety before caesarean section under spinal anaesthesia affects 11 % to 80 % of parturients. Benzodiazepine premedication is effective but causes amnesia, sedation and loss of control. Delivering information is an established alternative, but the optimal medium remains undetermined.

Aim: To compare two media of pre-anaesthetic information, a video capsule and a written leaflet, against standard consultation alone.

Methods: Prospective, single-centre, randomised, controlled, blinded three-arm trial (Monastir, Tunisia, July to December 2022). Two hundred and forty women scheduled for elective caesarean section under spinal anaesthesia were randomised into three groups: video capsule sent after the consultation, written leaflet in Arabic, or standard consultation only. The primary endpoint was pre-operative anxiety assessed by the APAIS score and an anxiety visual analogue scale.

Results: Two hundred and twenty-eight women were analysed, the groups being comparable at baseline. Mean global APAIS anxiety scores differed significantly ($p = 0.01$): 7.64 with video, 8.95 with leaflet and 10.5 in controls, high anxiety affecting 18 %, 31 % and 54 % respectively; post-hoc analysis was significant for video versus control ($p = 0.002$). The need for information fell with either medium ($p < 0.001$). No difference was found for peri-operative incidents or haemodynamics. Total 24-hour paracetamol consumption was lowest with video (1.37 ± 0.38 versus 1.85 ± 0.62 versus 2.73 ± 0.81 g, $p = 0.02$).

Conclusion: Structured pre-anaesthetic information reduces pre-operative anxiety, residual information needs and post-operative analgesic consumption. The video capsule was consistently the most effective medium and, being inexpensive, should enter routine preparation.

P-02: INTRAVENOUS LIDOCAINE, ANXIETY AND POSTOPERATIVE RECOVERY AFTER CAESAREAN SECTION

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Introduction: Anxiety is common after caesarean section and may be worsened by pain and drug-related side effects. Intravenous lidocaine, through its analgesic, anti-inflammatory and opioid-sparing properties, could reduce anxiety and

promote early recovery.

Aim: To evaluate the effect of intravenous lidocaine on post-operative anxiety, recovery and side effects after caesarean section under spinal anaesthesia.

Methods: Prospective, randomised, double-blind, placebo-controlled trial conducted in Monastir, Tunisia, over five months. After ethics committee approval and written informed consent, ninety parturients scheduled for caesarean section under spinal anaesthesia were randomised to lidocaine (1.5 mg/kg loading dose then 1.5 mg/kg/h infusion) or placebo. Primary endpoints were anxiety on the State-Trait Anxiety Inventory, duration of motor and sensory block, time to bowel function recovery and time to first ambulation. Secondary endpoints were pain on a visual analogue scale, pruritus, nausea and vomiting, and intraoperative haemodynamics.

Results: Anxiety scores were higher in the control group than in the lidocaine group. Recovery was earlier with lidocaine, with shorter times to bowel function recovery and to first ambulation. Lidocaine favoured haemodynamic stability, mean heart rate and mean arterial pressure being lower and more stable than in controls. Intraoperative and postoperative nausea and vomiting were significantly more frequent in the control group, and lidocaine significantly reduced pruritus. Pain scores were significantly lower in the lidocaine group.

Conclusion: Intravenous lidocaine, given as a 1.5 mg/kg loading dose followed by a 1.5 mg/kg/h infusion alongside spinal anaesthesia, reduces post-operative anxiety and promotes early recovery while lowering the incidence of side effects.

P-03: ERAS IN RESOURCE-CONSTRAINED SETTINGS: ORGANIZATIONAL SUCCESS VS. CLINICAL REALITY

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Introduction: Implementing Enhanced Recovery After Surgery (ERAS) in resource-constrained settings faces real-world hurdles, causing low adherence. This study evaluated whether a locally adapted, multidisciplinary colorectal ERAS protocol improves overall compliance ($\geq 70\%$ item fulfillment) and impacts postoperative morbidity and length of hospital stay (LOS).

Methods: A prospective, before-after interventional study included 66 adults (ASA I–III) undergoing elective colorectal surgery across two consecutive cohorts: Pre-ERAS ($n=33$) and Post-ERAS ($n=33$, local protocol implementation). The primary outcome was high compliance ($\geq 70\%$ of 22 GRACE-audit items). Secondary outcomes included 30-day morbidity and LOS. Multivariate logistic and linear regression models identified independent predictors.

Results: Baseline characteristics were strictly comparable between groups. Protocol implementation significantly increased overall adherence (aOR = 25.20, 95% CI: 5.29–120.04). Median compliant items per patient rose from 14 to 16 ($p < 0.001$). As detailed in Table 1, high compliance surged

due to targeted improvements in preoperative nutrition, bowel preparation omission, and early catheter removal. Despite these process improvements, 30-day morbidity and median LOS did not significantly differ. Multivariate regression demonstrated neoadjuvant chemo-radiotherapy independently predicted morbidity (aOR = 8.55, $p=0.002$), while postoperative complications (+4.33 days, $p<0.001$) and ASA 3 status (+4.00 days, $p=0.001$) significantly prolonged LOS.

Conclusion: The locally adapted ERAS protocol achieved organizational success, multiplying high compliance rates. However, clinical outcomes remained heavily constrained by patient frailty and oncological complexity. Establishing a dedicated ERAS nurse coordinator and continuous training are essential to translate compliance gains into clinical benefits.

P-04: ETHICAL DILEMMAS IN TRAUMA CARE: A TUNISIAN ANESTHESIOLOGIST AND EMERGENCY PHYSICIAN VIEW

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Introduction: Severe trauma, a leading cause of death in men under 40, is a frequent source of ethical dilemmas, particularly regarding treatment limitation or withdrawal. This dimension remains poorly studied in Tunisia. This study aimed to assess the ethical practices and perceptions of Tunisian anesthesiologists-intensivists and emergency physicians managing severe trauma patients, to identify the issues underlying these dilemmas, and to determine the tools used or desired to support ethical reflection.

Methods: We conducted a cross-sectional, descriptive, multicenter study over 6 months (November 2025–April 2026) among anesthesiologists-intensivists and emergency physicians from 6 Tunisian cities. Data were collected using an anonymous, self-administered, 17-item questionnaire (6 sections), distributed online and on paper, and analyzed with SPSS 20.

Results: Of 140 physicians approached, 56 responded (response rate 40%; 59% anesthesiologists-intensivists, 41% emergency physicians; 38% residents; 58% male). Fifty-eight percent had repeatedly faced an ethical dilemma, mainly related to decisions on the level of care and its continuation (39%), management of multiple casualties (23%), and obtaining consent (18%). Decisions were made collegially with fellow physicians or surgeons in 62% of cases, with limited involvement of relatives (20%) and paramedical staff (10%). Ninety percent of physicians reported emotional distress (anxiety and sadness, 43.8% each), which helped decision-making in only 35% of cases and hindered it in 30%. More than half (56%) had received no ethics training. The most commonly used tool was a physician-only ethics discussion group (60%), far ahead of joint medical-paramedical groups (26%) and access to an ethics referent (14%), whereas an in-house ethical guidance guide was perceived as the most useful tool (36%).

Conclusion: Ethical dilemmas are common among Tunisian anesthesiologists-intensivists and emergency physicians managing severe trauma, yet their resolution remains poorly structured, insufficiently collegial and multiprofessional, and inadequately supported by training or dedicated tools. Strengthening ethics education, systematically involving paramedical teams and families, and developing national guidelines and decision-support tools appear essential to improve the ethical care of these patients in Tunisia.

P-05: HUMAN FACTORS IN THE OPERATING ROOM: EVALUATING THE PRE-ANAESTHETIC BRIEFING IN

TUNISIAN UNIVERSITY

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Introduction: The operating room is a high-risk environment in which human factors — communication failures, lack of coordination, and inadequate anticipation — constitute a major cause of adverse events. The pre-anaesthetic briefing, recommended by the 2022 Professional Practice Guidelines (RPP) of the French Society of Anaesthesia and Intensive Care (SFAR), represents a structured tool designed to optimise intra-team communication, build a shared mental model, and improve patient safety. This study aimed to evaluate the implementation of this briefing and its perception by Anaesthesia and Intensive Care Technicians (TSAR) practising in four university hospitals in the Central-Eastern region of Tunisia.

Methods: A descriptive, cross-sectional, quantitative study was conducted from January to March 2026 in four university hospitals: CHU Taher Sfar (Mahdia), CHU Fattouma Bourguiba (Monastir), CHU Sahloul and CHU Farhat Hached (Sousse). A structured, anonymous, self-administered questionnaire was distributed to 100 TSAR selected from a target population of 228.

Results: The study population was predominantly female (81%), with a mean age of 40.4 ± 8.6 years and professional experience exceeding 10 years in 71% of participants. The vast majority (71%) reported awareness of the 2022 SFAR guidelines on human factors, and 70% considered a routine pre-induction briefing relevant. However, 80% of respondents reported the complete absence of an anaesthetist/technician briefing in their daily practice. The main barrier identified was lack of time (75%), followed by perceived lack of relevance (37.5%) and implementation difficulties (12.5%). Among the 20% who practised a briefing, the mean duration was 5.2 ± 2.2 minutes; content focused primarily on patient-related risks (90%) and surgical risks (80%); and the perceived impact on communication and teamwork was high (90%).

Conclusion: Our findings reveal a significant gap between a favourable perception of the briefing and its effective implementation in daily practice. The barriers identified are primarily organisational and cultural rather than genuinely temporal. Systematic implementation of the pre-anaesthetic briefing requires strong institutional commitment, ongoing training in human factors, and the development of standardised protocols. These **Results** highlight the urgency of integrating the 2022 SFAR recommendations into the daily practice of Tunisian operating theatres, establishing the briefing as a professional act of shared responsibility in service of patient safety.

P-06: NON-PHARMACOLOGICAL MANAGEMENT OF PREOPERATIVE ANXIETY IN CHILDREN UNDERGOING PEDIATRIC SURGERY

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Introduction: At every stage leading to the operating room, the sick child faces a distressing situation. The physiological reactions associated with anxiety are mainly mediated by the autonomic nervous system and can affect anesthetic induction and consumption. Anxiety can even increase the risk of postoperative complications, with greater postoperative pain

and behavioral disturbances that may persist in the long term. This growing concern helped spark our interest in virtual reality (VR), particularly in the healthcare field.

Objective: To study the effect of virtual reality on preoperative anxiety in children scheduled for circumcision.

Methods: This was a prospective, observational study. Seventy children older than 5 years, scheduled for circumcision, were included. After obtaining parental consent and explaining the procedure during the preanesthetic consultation, children watched their favorite cartoons (pre-recorded) from admission on the day of the procedure until induction (just before mask application), using a virtual reality headset (VR box) connected to an Android smartphone. Data were collected using the standardized Yale Preoperative Anxiety Scale questionnaire, which covers four domains: activity, vocalization, emotional expressivity, and apparent state of arousal.

Results: Seventy boys were included, with a mean age of 7 ± 2 years. Comparison of anxiety scores before and after the intervention using the Wilcoxon test showed a statistically significant difference across all domains [activity ($p=0.02$), vocalization ($p=0.04$), emotional expressivity ($p<0.001$)], except for arousal ($p=0.07$). The considerable attraction of the VR box, by distracting children from the real world, allowed them to better tolerate preoperative anxiety.

Conclusion: The **Results** of this study confirm the anxiolytic effect of virtual reality when exposing children to unfamiliar and stressful situations, such as surgery and the operating room.

P-07: ARTIFICIAL INTELLIGENCE IN ANESTHESIA: STUDENT PERCEPTIONS AND TRAINING NEEDS

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Introduction: Artificial intelligence (AI) is increasingly integrated into healthcare, including anesthesia and perioperative medicine. Understanding how future practitioners perceive its benefits, limitations, and associated training needs is essential to guide its safe and effective adoption. This study aimed to assess anesthesia-intensive care students' perceptions of the advantages and drawbacks of AI in anesthesia practice, and to identify their training needs and suggestions

Methods: We conducted a cross-sectional, multicenter, descriptive study over two months (March–April 2026) among anesthesia-intensive care students from five Tunisian health schools. Data were collected using an anonymous, self-administered, 18-item online questionnaire (5 sections) and analyzed with SPSS 23.

Results: Seventy students were included (mean age 20.8 ± 2.7 years; 71.4% female). ChatGPT was the AI tool used by all respondents. While 54.3% used AI frequently in daily life, only 21.4% reported a clear understanding of its applications in anesthesia. Perceived benefits included time-saving (95.7%), enhanced monitoring and predictive analysis (90%), decision support (77.1%), and reduced human error (67.1%); 92.9% considered AI unable to replace the anesthesiologist. Major concerns included data security (75.7%), lack of empathy (62.9%), inability to manage multiple patients or emergencies simultaneously (78.6% and 64.3%, respectively), and care dehumanization (65.7%). Trust in AI was partial for 61.4% of respondents. Most students (78.6%) foresaw a role for AI in the future of anesthesia and expressed a need for dedicated training (62.9%), notably through simulation-based learning and practical workshops

Conclusion: AI is perceived by anesthesia-intensive care

students as a promising tool to improve patient safety and clinical efficiency, but its adoption raises significant concerns regarding reliability, empathy, and data security. Structured, continuous training—particularly through simulation—appears essential to ensure a safe and effective integration of AI into anesthesia practice.

P-08: TEAM COMMUNICATION AND COORDINATION DURING EMERGENCY CESAREAN SECTION

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Introduction: Communication is essential from the earliest stages of life for establishing social relationships, and its importance has increased further with technological and medical advances. This importance becomes even more evident in critical situations characterized by urgency, stress, and rapidly evolving clinical conditions, such as emergency cesarean sections. Despite this, communication failures remain a major cause of adverse events, thereby compromising the quality and safety of care.

This study aims to assess knowledge regarding interprofessional communication during emergency cesarean sections in our healthcare institutions.

Methods: This multicentric, descriptive, cross-sectional study investigated the importance of interprofessional communication during emergency cesarean sections in the operating rooms of the university hospitals of Farhat Hached Sousse, Taher Sfar Mahdia, the Maternity and Neonatology Center of Monastir, and Hady Ali Soua Hospital of Ksar Hellal.

Participants included anesthesia and intensive care technicians, anesthesiologists, anesthesia and intensive care residents, obstetric surgeons, operating room nurses, and scrub nurses.

Data were collected using a questionnaire designed to evaluate knowledge and practices related to communication during emergency cesarean sections.

Results: Participants acknowledged the importance of communication during emergency cesarean sections and reported being able to manage stress effectively in critical situations. However, deficiencies were identified in communication practices: briefing was only partially performed, checklists were poorly used (27%), closed-loop communication was insufficiently practiced (26.7%), time-out procedures were largely neglected (3.3%), and post-stabilization debriefing was inadequately conducted (38.3%). Furthermore, 65% of participants had never received communication-focused training. Some professionals also identified disagreement with the leader and uncertainty as barriers to open communication with the team leader.

Conclusion: These findings highlight the need to strengthen continuous training programs in order to standardize communication practices during emergency cesarean sections. It is also essential to develop leadership skills among healthcare professionals to promote open, effective, and constructive communication. Further research is needed to improve knowledge and optimize the use of communication tools within healthcare teams.

P-09: OPERATING ROOM SAFETY PRACTICES AMONG JUNIOR ANESTHESIOLOGY RESIDENTS: AN OBSERVATIONAL AUDIT

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Introduction: Operating-room safety requires reliable checks, structured communication, and effective incident reporting. This audit assessed compliance with perioperative safety practices among junior anesthesiology residents.

Methods: This prospective single-center clinical audit was conducted from August 10–14, 2026, in a Tunisian university hospital. Ten first- and second-year anesthesiology residents were observed during 29 procedures using a standardized checklist covering pre-anesthetic checks, communication, incident reporting, and postoperative handover. Repeated observations were analyzed per procedure; reporting-pathway knowledge and perceived barriers were assessed once per resident. Data were anonymous

Results: Most technical checks were consistently performed (Table 1). Consent was verified in 15/29 procedures (51.7%), suction function in 25/29 (86.2%), and joint verbal checklist completion by the resident and anesthesia technician in 4/29 (13.8%). Direct anesthesia-surgery communication occurred in all procedures, and high-risk phases were announced in 25/29 (86.2%). Nine of 10 residents (90%) could not describe the institutional reporting pathway, and 9/10 (90%) cited fear of sanctions as a reporting barrier. Postoperative handover was completed in all procedures.

Conclusion: Technical preparation was reliable, but verbal checklist use, consent verification, and reporting culture showed major gaps. Targeted simulation, standardized briefings, clear reporting pathways, and non-punitive feedback should be implemented and reassessed in a second audit cycle.

CARCINOLOGIE MÉDICALE

P-10: CT-BASED ASSESSMENT OF SARCOPENIA IN METASTATIC BREAST CANCER: PROGNOSTIC IMPACT

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Introduction: Breast cancer is the most frequently diagnosed cancer in women worldwide. Metastatic disease is associated with poor prognosis, and sarcopenia has emerged as a potential prognostic factor in cancer patients. However, its prevalence and clinical impact remain insufficiently studied in metastatic breast cancer. This study aimed to assess sarcopenia using computed tomography (CT), determine its prevalence, and evaluate its association with chemotherapy-related toxicity and progression-free survival (PFS).

Methods: This retrospective study included women with metastatic breast cancer at diagnosis who were followed at Salah Azaïz Institute Tunisia, and received the same palliative chemotherapy protocol (FEC-100). Sarcopenia was assessed on CT by measuring the skeletal muscle index (SMI). Patients were classified as sarcopenic or non-sarcopenic according to the predefined SMI threshold. The two groups were compared regarding severe chemotherapy-related toxicity and progression-free survival.

Results: Among the 41 patients, the mean age was 48 years, and the mean body mass index (BMI) was 27.2 kg/m² (range, 18.5–40.8 kg/m²). Severe chemotherapy-related toxicity occurred in 21 patients (51%). The median PFS was 10 months. Despite

the absence of underweight according to BMI, sarcopenia was identified in 39% of patients. Severe chemotherapy-related toxicity occurred significantly more frequently in sarcopenic than in non-sarcopenic patients (81% vs. 32%, respectively; $p=0.002$). Sarcopenia was also significantly associated with shorter PFS, with a median PFS of 5 months in sarcopenic patients compared with 13 months in non-sarcopenic patients ($p<0.001$).

Conclusion: Sarcopenia is common in patients with metastatic breast cancer, including those without low BMI, and is associated with increased severe chemotherapy-related toxicity and shorter PFS. CT provides a readily available method for detecting sarcopenia during routine cancer staging. Systematic assessment and reporting of sarcopenia on staging CT may provide clinically relevant prognostic information and help inform the overall management of patients with metastatic breast cancer.

P-11: DIAGNOSTIC DELAY IN LUNG CANCER: DETERMINANTS AND IMPACT ON TUMOR STAGE – EXPERIENCE FROM A SOUTHERN

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Introduction: Diagnostic delay in lung cancer significantly affects prognosis. Identifying factors contributing to delayed diagnosis could improve early management. Objective: To analyze factors associated with diagnostic delay and assess their impact on tumor stage at diagnosis.

Methods: A retrospective study includes patients diagnosed with lung cancer at the Pulmonology Department between 2020 and 2025. Patients were divided into 2 groups based on symptom duration:

-Group 1(G1) (≤ 1 month) = 56 patients (51.9%) - Group 2(G2) (>1 month) = 52 patients (48.1%)

Results: Among 108 patients included (87% male, mean age 61.7 years), 84.3% were smokers. Predominant histological types were adenocarcinomas (45.4%), squamous cell carcinomas (20.4%), and small cell lung cancers (15.7%). At diagnosis, 56.5% presented with stage IV disease. Female gender was significantly associated with shorter delay ($p=0.007$). Group 2 patients more frequently presented with altered general condition (80.8% vs 57.1%, $p=0.011$) and abnormal physical examination (90.4% vs 73.2%, $p=0.022$). Active smoking was correlated with prolonged diagnostic delay ($p=0.027$). A delay of >1 month was significantly associated with stage IV diagnosis ($p=0.01$). No correlation was found between histological type and diagnostic delay.

Conclusion: Diagnostic delay >1 month affects nearly half of patients and significantly correlates with metastatic stage. Smoking and male gender are risk factors for diagnostic delay. These findings highlight the importance of targeted screening in at-risk populations for earlier diagnosis.

CHIRURGIE DIGESTIVE ET VISCÉRALE

P-12: RISK FACTORS FOR RECURRENCE AFTER CURATIVE SURGERY FOR GASTROINTESTINAL STROMAL TUMORS

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Introduction: Recurrence remains a major concern after macroscopically curative surgery for gastrointestinal stromal tumors (GISTs). Although tumor biology is central to prognosis, adverse operative and pathological events may identify patients at particularly high risk. This study assessed the association of surgical margin status, intraoperative tumor rupture, and multivisceral resection with postoperative recurrence.

Methods: We conducted a retrospective, single-center longitudinal study including patients who underwent curative-intent surgery for GIST between January 2014 and December 2024. Patients managed non-operatively, treated with palliative surgery, or presenting incomplete records were excluded. Clinical, operative, pathological, recurrence, and survival data were reviewed. Recurrence-free survival was assessed during follow-up, and the distributions of multivisceral resection, microscopically involved margins, and tumor rupture were compared between patients with and without recurrence.

Results: Fifty patients were included. Mean age was 60 years, and 28 patients were men. The stomach was the most frequent primary site (n=31), followed by the small bowel (n=11). Thirteen tumors were locally advanced. R0 resection was achieved in 38 patients (76%), while 12 had microscopically involved margins. Eight patients experienced intraoperative tumor opening or rupture. Five patients (10%) developed recurrence. Multivisceral resection was reported in 4 of 5 patients with recurrence versus 6 patients without recurrence (p=0.004). R1 resection was documented in 3 patients with recurrence versus 2 without recurrence (p=0.005). Tumor rupture occurred in 2 patients with recurrence and 4 without recurrence (p=0.046). Recurrence-free survival was 92% at 2 years and 90% at 5 years; overall survival was 96% at both time points.

Conclusion: Microscopically involved margins, tumor rupture, and multivisceral resection were significantly associated with recurrence after curative-intent GIST surgery. These features may identify patients requiring intensified multidisciplinary assessment, appropriate systemic therapy, and closer postoperative surveillance. Larger studies are needed to determine their independent prognostic value.

P-13: THE ROLE OF LAPAROSCOPY IN THE SURGICAL MANAGEMENT OF GASTROINTESTINAL STROMAL TUMORS

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Introduction: Complete surgical resection without tumor rupture is the cornerstone of treatment for localized gastrointestinal stromal tumors (GISTs). Laparoscopy may reduce the invasiveness of surgery, but its use must remain compatible with oncological principles, particularly safe tumor handling and complete excision. This study aimed to describe the place and feasibility of laparoscopy within a curative-intent surgical strategy for GIST.

Methods: We conducted a retrospective, single-center longitudinal study including patients who underwent curative-intent surgery for GIST between January 2014 and December 2024. Patients managed non-operatively, treated with palliative intent, or presenting incomplete records were excluded. Clinical, tumor, operative, pathological, recurrence, and survival data were reviewed. Surgical access was classified as

completed laparoscopy, primary laparotomy, or conversion to open surgery. Overall oncological outcomes were reported to describe the Results of the complete surgical cohort; no direct comparison between approaches was undertaken because group-specific outcomes were unavailable.

Results: Fifty patients were included. Mean age was 60 years, and 28 patients were men. The primary tumor was gastric in 31 patients and located in the small bowel in 11; rectal, duodenal, colonic, and pancreatic locations were less frequent. Thirteen tumors (26%) were locally advanced, and 9 patients required emergency surgery. Laparoscopic resection was completed in 23 patients (46%), primary laparotomy was performed in 24 (48%), and conversion to open surgery was required in 3 (6%). Across the entire cohort, R0 resection was achieved in 38 patients (76%), while intraoperative tumor opening or rupture occurred in 8 (16%). Twenty-six patients received postoperative systemic therapy. Five patients (10%) developed recurrence. Recurrence-free survival was 92% at 2 years and 90% at 5 years, whereas overall survival was 96% at both time points.

Conclusion: Laparoscopy was successfully completed in nearly half of patients undergoing curative-intent surgery for GIST, while conversion was required in a limited proportion. These findings support its feasibility as one component of a tailored surgical strategy in selected patients. The choice of approach should remain guided by tumor location, local extension, the possibility of complete resection, and the need to avoid tumor rupture. Comparative studies with approach-specific outcomes are required to determine any relative benefit over open surgery.

P-14: CT SCAN SIGNS OF BOWEL COMPROMISE IN SMALL BOWEL OBSTRUCTION: CORRELATION WITH OPERATIVE SEVERITY

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Introduction: The prognosis of adhesive small bowel obstruction is closely related to the early recognition of ischemia and necrosis. Computed tomography (CT) is central to identifying patients who may require urgent surgery. This study describes CT severity signs and operative findings in patients treated for adhesive small bowel obstruction.

Methods: We retrospectively reviewed patients managed for acute adhesive small bowel obstruction between January 2019 and December 2024. Clinical management, emergency CT findings, indications for surgery, and intraoperative bowel status were collected. CT signs considered potentially suggestive of bowel compromise included bowel-wall or mesenteric edema, the whirl sign, and reduced mural enhancement. Operative severity was described by the presence of reversible ischemia, necrosis, perforation, mesenteric hematoma, or volvulus.

Results: Among 214 patients, 138 (64.5%) underwent emergency abdominal CT. Twenty-four patients had CT severity signs. Edema was reported in 11 patients (5.1% of the total cohort), a whirl sign in 7 (3.3%), and reduced mural enhancement in 6 (2.8%). Eighty patients required surgery: 37 because of severity signs and 43 after failure of initial non-operative management. At exploration, the bowel was viable in 60 patients. Seventeen patients had ischemia with recovery of viability after division of the adhesive band, 4 had bowel necrosis, and 3 had perforation. Volvulus was observed in 4 patients and mesenteric hematoma in 1. Seven patients required intestinal resection, and 5 underwent resection with stoma formation.

Conclusion: CT identified a small but clinically important subgroup with findings suggestive of bowel compromise. Edema, the whirl sign, and reduced mural enhancement should prompt heightened concern and early surgical reassessment, particularly when accompanied by clinical deterioration. Because patient-level diagnostic estimates were not available, these findings should be interpreted as descriptive and require validation in a dedicated diagnostic-accuracy study.

P-15: PREOPERATIVE DIAGNOSTIC IMAGING IN ADULT ABDOMINAL CYSTIC LYMPHANGIOMA: A SURGICAL CASE SERIES

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Introduction: Abdominal cystic lymphangioma is a rare benign lymphatic malformation with nonspecific clinical manifestations and imaging appearances that may overlap with other cystic lesions. Preoperative recognition is therefore challenging. This study evaluated the diagnostic yield of preoperative imaging and described the clinicopathological features of surgically treated abdominal cystic lymphangioma in adults.

Methods: We conducted a retrospective study of consecutive patients undergoing surgery for abdominal cystic lymphangioma in the Department of Surgery A at La Rabta Hospital between January 2015 and December 2023. Clinical presentation, mode of discovery, preoperative radiological diagnosis, lesion size, operative management, completeness of resection, and recurrence were reviewed. Histopathological examination of the surgical specimen was considered the definitive diagnosis.

Results: Twenty-nine patients were included. Mean age was 50 years, with a range of 14 to 80 years. Abdominal pain was the leading presentation, occurring in 18 patients (62.1%), while an abdominal mass was detected on physical examination in 5 (17.2%). Four lesions (13.8%) were discovered incidentally. Preoperative imaging suggested cystic lymphangioma in 19 patients, corresponding to a recognition rate of 65%. Mean lesion size was 10 cm, ranging from 1 to 25 cm. All procedures were initiated laparoscopically, and no conversion to open surgery was required. Cyst puncture was used in 5 patients (17%) to facilitate resection. Complete excision was achieved in 27 patients (96%). Two patients (7%) developed recurrence during follow-up.

Conclusion: Preoperative imaging suggested the correct diagnosis in approximately two-thirds of patients, confirming its value while highlighting persistent diagnostic uncertainty. Because abdominal cystic lymphangioma has nonspecific symptoms and may mimic other cystic lesions, histopathological confirmation remains essential. Complete laparoscopic excision was feasible in most patients and was associated with a low recurrence rate.

P-16: PREDICTORS OF POSTOPERATIVE MORBIDITY AFTER LIVER RESECTION: A RETROSPECTIVE COHORT STUDY

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Introduction: Morbidity after liver resection remains substantial despite improvements in surgical and anesthetic

care. Identifying high-risk patients may improve perioperative management.

Our main is to identify factors associated with postoperative morbidity after liver resection and describe postoperative mortality.

Methods: We retrospectively included patients undergoing liver resection between January 2016 and December 2025. Candidate factors included age, sex, BMI, ASA class, cirrhosis, fibrosis, portal hypertension, steatosis, baseline bilirubin, albumin, prothrombin time and platelet count, diagnosis, neoadjuvant treatment, surgical approach, resection type, associated procedures, two-stage hepatectomy, pedicle or inferior vena cava clamping, operative duration, blood loss, transfusion, norepinephrine requirement, fluid volume, and urine output. The primary outcome was overall postoperative morbidity. Medical and surgical complications, Clavien–Dindo grade, liver failure, bile leakage, hemorrhage, reoperation, hospital stay, and mortality were recorded.

Results: Among 82 patients, overall postoperative morbidity occurred in 23 patients (28.0%). Medical and surgical complications affected 18 (22.0%) and 9 patients (11.0%), respectively. The main medical complications were respiratory infection (12.2%), hydroelectrolytic disorders (6.1%), and venous thromboembolism (4.9%). The main surgical complications were intra-abdominal abscess (6.1%), wound abscess (6.1%), bile leakage (4.9%), and postoperative hemorrhage (4.9%). Post-hepatectomy liver failure occurred in 2 patients (2.4%), while Clavien–Dindo grade III or higher complications occurred in 2 patients (2.4%). Reoperation was required in 2 patients (2.4%). Median hospital stay was 7 days (IQR, 5–10), and postoperative mortality was 1.2%. On univariate analysis, morbidity was associated with greater blood loss (median 250 vs 150 mL; $p=0.001$), higher intraoperative fluid administration (2,500 vs 2,000 mL; $p=0.013$), and intraoperative transfusion (morbidity: 58.3% vs 22.9%; $p=0.031$). In the parsimonious multivariate model, blood loss remained independently associated with morbidity for every additional 100 mL (adjusted OR=1.38; 95% CI, 1.04–1.84; $p=0.025$), as did each additional 500 mL of intraoperative fluid administration (adjusted OR=1.44; 95% CI, 1.01–2.05; $p=0.042$).

Conclusion: Greater intraoperative blood loss and higher fluid administration were independently associated with postoperative morbidity. These findings support careful blood-loss control and individualized intraoperative fluid management during liver resection.

P-17: INTRAOPERATIVE EVENTS DURING LIVER RESECTION: INCIDENCE AND IMPACT ON POSTOPERATIVE OUTCOMES

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Introduction: Liver resection may involve bleeding, vascular clamping, hemodynamic instability, and major changes in fluid balance. These intraoperative events may influence postoperative recovery.

Our aim was to describe intraoperative surgical and anesthetic events during liver resection and evaluate their association with postoperative outcomes.

Methods: We retrospectively included patients undergoing liver resection between January 2016 and December 2025. Recorded variables included arterial and central venous catheter placement, surgical approach and conversion,

operative duration, pedicle and inferior vena cava clamping, clamping duration, blood loss, red blood cell and plasma transfusion, norepinephrine requirement and intraoperative withdrawal, total fluid volume, urine output, and other incidents. Outcomes included postoperative norepinephrine support, extubation time, liver failure, hemorrhage, medical and surgical complications, Clavien–Dindo grade, reoperation, hospital stay, and mortality. Associations with morbidity were assessed using univariate and multivariate analyses.

Results: 82 patients were analyzed. Arterial and central venous catheters were placed in 26.8% and 28.0% of patients, respectively. Pedicle and inferior vena cava clamping were performed in 39.0% and 13.4%, with median cumulative durations of 15 minutes (IQR, 10–20) and 10 minutes (IQR, 7.5–36), respectively. Median operative duration was 200 minutes (IQR, 170–250). Median blood loss, fluid administration, and urine output were 200 mL (IQR, 100–300), 2,000 mL (IQR, 2,000–3,000), and 300 mL (IQR, 200–400), respectively. Intraoperative transfusion and norepinephrine support were required in 14.6% and 15.9% of patients. Norepinephrine was withdrawn before the end of surgery in 8 of the 13 patients who required it (61.5%). Other incidents consisted of one episode of bradycardia and one inadvertent arterial catheter removal. Patients receiving intraoperative transfusion had higher morbidity (58.3% vs 22.9%; $p=0.031$), more frequent postoperative norepinephrine requirement (25.0% vs 4.3%; $p=0.038$), and longer hospital stay (median 10 vs 6 days; $p<0.001$). Intraoperative norepinephrine use was associated with postoperative liver failure (15.4% vs 0%; $p=0.024$) and continued postoperative norepinephrine support (30.8% vs 2.9%; $p=0.005$). After adjustment, blood loss per additional 100 mL (adjusted OR=1.38; 95% CI, 1.04–1.84; $p=0.025$) and fluid administration per additional 500 mL (adjusted OR=1.44; 95% CI, 1.01–2.05; $p=0.042$) remained independently associated with postoperative morbidity.

Conclusion: Blood loss and higher intraoperative fluid administration were independently associated with postoperative morbidity. Transfusion and norepinephrine requirements were also markers of an unfavorable postoperative course. These Results support individualized hemodynamic management and careful blood-loss control during liver resection.

P-18: RISK FACTORS FOR INTRA-ABDOMINAL HEMORRHAGE AFTER PANCREATODUODENECTOMY

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Introduction: Postpancreatectomy hemorrhage is an uncommon but potentially life-threatening complication of pancreaticoduodenectomy. Recognition of perioperative risk factors may facilitate prevention and targeted postoperative surveillance. This study aimed to identify factors associated with intra-abdominal hemorrhage after pancreaticoduodenectomy.

Methods: We retrospectively reviewed 140 patients who underwent pancreaticoduodenectomy for tumors of the biliopancreatic junction between January 2002 and December 2021. Patient characteristics, biological findings, operative variables, pancreatic features, postoperative complications, and pathological diagnoses were analyzed. The primary outcome was postoperative intra-abdominal hemorrhage. Associations were evaluated by univariate analysis and expressed as odds ratios (ORs) with 95% confidence intervals (CIs).

Results: The mean patient age was 59 years, and 91 patients were men. Intra-abdominal hemorrhage occurred in 16 patients (11.4%), with a mean onset of seven postoperative days. Diabetes was significantly associated with hemorrhage (OR=3.269, 95% CI: 1.130–9.459; $p=0.023$). A low preoperative prothrombin level also increased hemorrhagic risk (OR=4.792, 95% CI: 1.255–18.289; $p=0.033$). Operative duration >320 minutes was the strongest associated factor (OR=17.632, 95% CI: 2.259–137.620; $p<0.001$). Clinically relevant postoperative pancreatic fistula was significantly associated with hemorrhage (OR=3.316, 95% CI: 1.078–10.202; $p=0.029$). Blood loss >400 mL, transfusion, pancreatic texture, pancreatic duct diameter, vascular injury, and reconstruction type were not significantly associated with hemorrhage. The underlying pathological diagnosis was likewise unrelated to bleeding risk.

Conclusion: Diabetes, impaired coagulation, prolonged operative duration, and clinically relevant pancreatic fistula were associated with intra-abdominal hemorrhage after pancreaticoduodenectomy. These findings support careful preoperative optimization and enhanced surveillance of high-risk patients.

P-19: CLINICAL PRESENTATION, MANAGEMENT, AND OUTCOMES OF HEMORRHAGE AFTER PANCREATODUODENECTOMY

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Introduction: Hemorrhage after pancreaticoduodenectomy is associated with complex management and substantial mortality, particularly when it occurs late or in association with a pancreatic fistula. This study described the incidence, severity, management, and short-term outcomes of postpancreatectomy hemorrhage.

Methods: We conducted a retrospective study of 140 consecutive patients undergoing pancreaticoduodenectomy for biliopancreatic junction tumors between 2002 and 2021. Hemorrhagic complications were analyzed according to their location, time of onset, severity grade, therapeutic management, and postoperative outcome.

Results: Postoperative hemorrhage occurred in 18 patients (12.9%) after a mean interval of seven days. Sixteen patients developed intra-abdominal hemorrhage and two experienced digestive hemorrhage. According to severity classification, one hemorrhage was grade A, six were grade B, and 11 were grade C. Ten of the 16 patients with intra-abdominal hemorrhage underwent reoperation. Two patients initially underwent radiological embolization, targeting the left gastric artery and the gastroduodenal artery stump, respectively. Embolization failed in both cases, requiring subsequent surgical hemostasis and drainage. Outcomes following intra-abdominal hemorrhage were favorable in eight patients, while eight died; six deaths were directly attributed to hemorrhage. Both digestive hemorrhages occurred after the first postoperative week. One was successfully treated endoscopically, while the other resolved with resuscitative and supportive management. The overall postoperative mortality rate for the entire cohort was 7.9%.

Conclusion: Postpancreatectomy hemorrhage was predominantly intra-abdominal, frequently severe, and associated with high mortality. Grade C hemorrhage often required invasive treatment. Early recognition, access to interventional radiology, and prompt surgical management

when embolization fails are essential for improving outcomes.

P-20: PREDICTORS OF SEVERE ACUTE PANCREATITIS AND CLINICAL OUTCOMES: A THREE-YEAR RETROSPECTIVE COHORT STUDY

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Introduction: Acute pancreatitis (AP) is one of the most common gastrointestinal emergencies, characterized by a highly variable clinical course ranging from mild self-limiting episodes to severe life-threatening forms complicated by multiorgan failure. Early identification of prognostic factors and timely optimization of therapeutic strategies represent major clinical priorities, particularly given the regional variability in epidemiological profiles and etiological distribution.

Methods: A retrospective, descriptive, and analytical monocentric study was conducted over a three-year period (January 2022 – December 2024). Of 250 initially screened records, 151 patients fulfilling the 2012 Revised Atlanta Classification diagnostic criteria with complete medical files were included. Sociodemographic, clinical, biological, radiological, prognostic, and therapeutic variables were collected using a standardized data collection form and analyzed using SPSS version 26. Quantitative variables are expressed as mean $\pm$ standard deviation; qualitative variables as frequencies and percentages.

Results: The mean patient age was 55.0 $\pm$ 18.5 years (range: 15–95), with a marked female predominance (65.6%; M/F ratio = 0.52). The most prevalent comorbidities were obesity (25.8%), type 2 diabetes mellitus, and hypertriglyceridemia (15.9% each). Clinically, typical abdominal pain was present in 76.8% of cases, associated with nausea and vomiting in 70.9%. Serum lipase exceeded three times the upper limit of normal in 92.7% of patients, and CRP levels above 150 mg/L at 48 hours were recorded in 15.2%. CT imaging, performed in 98.7% of patients (mean delay: 3.6 $\pm$ 1.6 days), revealed a predominance of interstitial edematous forms (78.1%) over necrotizing forms (21.9%). Balthazar grade C was the most frequent (42.4%), and a CTISM score below 3 was noted in 71.5% of cases. According to the Revised Atlanta Classification, 35.8% of cases were mild, 40.4% moderately severe, and 23.8% severe. Organ failure (Marshall score $\geq$ 2) occurred in 18.5% of patients. Management relied on Ringer's lactate resuscitation (97.4%), systematic analgesia (99.3%), and a short-term nil-by-mouth period (2.24 $\pm$ 1.02 days). Cholecystectomy was performed in 45.7% of patients. Overall morbidity was 8.6% and mortality 3.3%, predominantly attributed to multiorgan failure and septic shock.

Conclusion: In our series, acute pancreatitis predominantly affects middle-aged women with a frequent metabolic background. Although interstitial edematous forms are prevalent, nearly one quarter of patients present with moderately severe to severe disease according to the Atlanta classification, underscoring the critical importance of early and systematic severity stratification. The integration of biological markers SIRS criteria, CRP clinical scoring tools such as the Marshall score, and CT-based severity indices remains essential to guide optimal patient management. The observed mortality rate is consistent with contemporary international literature, reflecting the quality of care delivered despite a substantial

proportion of severe cases.

CHIRURGIE THORACIQUE

P-21: FACTORS ASSOCIATED WITH POSTOPERATIVE MORBIDITY FOLLOWING SURGICAL RESECTION FOR BRONCHIECTASIS

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Introduction: Surgical resection remains an effective therapeutic option for carefully selected patients with complicated bronchiectasis. However, postoperative morbidity remains a major challenge, influenced by various patient- and disease-related factors.

Methods: We conducted a retrospective single-center study of 49 consecutive patients who underwent surgical resection for bronchiectasis between 2018 and 2026. Demographic, clinical, radiological, etiological, and surgical data were collected. Postoperative complications were classified according to the Clavien-Dindo classification. Patients were compared according to the occurrence of postoperative complications.

Results: The median age was 48 years (IQR, 28–58), with 10 patients (20.4%) aged under 18 years. A history of pulmonary tuberculosis was reported in 8 patients (16.3%), while bronchiectasis was localized in 46 patients (93.9%). Pleuropulmonary adhesions and difficult hilar dissection were observed in 31 (63.3%) and 21 (42.9%) patients, respectively. Postoperative complications occurred in 23 patients (46.9%), with prolonged air leak being the most frequent complication (8 patients, 16.3%). Major complications (Clavien–Dindo grade $\geq$ III) occurred in 6 patients (12.2%), with no postoperative or 30-day mortality. Patients who developed postoperative complications were significantly older than those without complications (54 vs. 41.5 years; $p=0.009$). Each 10-year increase in age was associated with higher odds of postoperative morbidity (OR, 1.46; 95% CI, 1.05–2.02; $p=0.024$). Previous pulmonary tuberculosis was not significantly associated with postoperative morbidity ($p=0.706$).

Conclusion: Surgical resection for bronchiectasis was associated with substantial postoperative morbidity, although most complications were non-severe. No postoperative or 30-day mortality was observed in this series. Older age was significantly associated with an increased risk of postoperative morbidity, highlighting the importance of careful preoperative assessment and patient selection.

P-22: PRIMARY SPONTANEOUS PNEUMOTHORAX IN ACTIVE PROFESSIONALS: COMPLICATIONS AND RISK FACTORS

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Introduction: Primary spontaneous pneumothorax (PSP) is a common condition in young adults, characterized by the presence of air in the pleural cavity without traumatic cause.

Although generally benign, it can lead to significant functional limitations in physically active professionals.

Methods: We conducted a retrospective descriptive study including 83 military personnel hospitalized for PSP in the cardiothoracic surgery and pulmonology departments of the Principal Military Hospital of Tunis between 2015 and 2024. Epidemiological, clinical, radiological, therapeutic, and follow-up data were analyzed. Multivariate analysis was performed to identify independent predictors of postoperative complications.

Results: The mean age of patients was 28.7 ± 6.6 years. The population was entirely male, with a high prevalence of active smoking (77%). Postoperative courses were uncomplicated in 60% of cases, whereas 40% experienced complications, predominantly prolonged air leak (59%) and pneumonias (18%). Multivariate analysis identified several independent predictors of postoperative complications. Active smoking without cessation was a major risk factor (odds ratio [OR] = 23.51; 95% confidence interval [CI] 1–551; $p=0.041$). Total pneumothorax on chest radiograph significantly increased the risk (OR = 11.65; 95% CI 1–84; $p=0.015$). Exclusive video-assisted thoracoscopic surgery (VATS) management had a protective effect (OR = 0.101; 95% CI 0.014–0.717; $p=0.022$). The requirement for orotracheal intubation was a strong adverse predictor (OR = 34.14; 95% CI 2–488; $p=0.007$).

Conclusion: In active professionals with PSP, postoperative complications are common and are strongly influenced by smoking status, pneumothorax extent, and perioperative management. Video-assisted thoracoscopic surgery is protective, while orotracheal intubation and total pneumothorax substantially increase complication risk. Tailored management strategies are essential to reduce complications and preserve professional capacity in this high-risk population.

P-23: CEPHALIC VEIN CUTDOWN FOR VENOUS ACCESS DEVICE PLACEMENT: SUCCESS RATE AND RISK FACTORS

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Introduction: Totally implantable venous access devices are crucial for long-term oncology care. While the percutaneous subclavian approach is commonly used, it carries significant risks. Cephalic vein cutdown offers a safer alternative by avoiding blind venipuncture, though concerns about technical failure persist, especially in patients with challenging anatomy.

Methods: We conducted a retrospective descriptive and analytical study including 513 consecutive patients who underwent first-line totally implantable venous access device implantation via cephalic vein cutdown in a single cardiothoracic surgery department between January 2020 and December 2024. In all cases, the procedure was initiated through surgical dissection of the cephalic vein. Procedural failure was defined as inability to complete implantation through the cephalic vein requiring conversion to an alternative central venous access.

Results: This study included 513 patients in whom cephalic vein cutdown was attempted as the first-line approach. The overall success rate was 90.4%. Small-caliber cephalic veins accounted for 3.1% of failures, complete absence of the cephalic vein for 2.7%, and mechanical obstruction for 2.3%. Body mass index ≥ 25 kg/m² was independently associated with procedural failure, with higher failure rates than body mass index < 25 kg/m² (12% versus 6.3%; $p=0.046$). Left-sided implantation had a higher risk of failure than right-sided placement (17.4% versus 7.4%; $p=0.014$). Procedures performed by residents had higher

failure rates than those performed by senior surgeons (13.3% versus 7%; $p<0.001$).

Conclusion: Cephalic vein cutdown is a safe and highly effective first-line technique for totally implantable venous access device implantation, achieving a success rate exceeding 90%. Procedural failure is significantly associated with elevated body mass index, left-sided access, anatomical variations, and limited operator experience.

GASTRO-ENTÉROLOGIE

P-24: EARLY SURGERY IN CROHN'S DISEASE: PREDICTIVE FACTORS AND CLINICAL PROFILE IN A TUNISIAN COHORT

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Introduction: Crohn's disease (CD) is a chronic inflammatory bowel disease characterized by a progressive and destructive course that may lead to intestinal damage and surgery. Despite major therapeutic advances, a substantial proportion of patients still require surgical resection early after diagnosis.

Our Aim was to determine the rate of early surgery in Tunisian patients with CD and identify factors associated with early surgical intervention.

Methods: We conducted a retrospective monocentric study including 120 patients with CD followed between 2012 and 2023. Early surgery was defined as intestinal resection within 12 months after diagnosis. Demographic, clinical, biological, radiological, and endoscopic data were analyzed. Univariate and multivariate analyses were performed to identify predictive factors associated with early surgery.

Results: Among 120 patients, 57 (47.5%) underwent intestinal resection, including 31 patients (25.8%) who required early surgery. Mean delay to early surgery was 4 ± 4.3 months. Twelve patients (10%) underwent surgery at diagnosis. Patients requiring early surgery more frequently had ileal or ileocecal disease (61.3% vs 31.7%, $p=0.006$), stricturing or penetrating phenotypes (96.8% vs 39.7%, $p<0.001$), and higher leukocyte counts at diagnosis (11.82 ± 7 vs 8.44 ± 3.12 G/L, $p=0.029$). Initial radiological complications were significantly associated with early surgery ($p<0.001$). In contrast, inflammatory phenotype and isolated colonic disease were more frequent in non-operated patients. Normal BMI was more common among early surgery patients, whereas obesity was more frequent in medically managed patients ($p=0.049$).

Conclusion: Early surgery was required in nearly one-quarter of Tunisian patients with CD and was strongly associated with complicated disease behavior and ileal involvement. Early identification of these high-risk phenotypes may improve individualized therapeutic strategies.

P-25: PERFORMANCE OF THE ADMIT-ASC SCORE IN ACUTE SEVERE ULCERATIVE COLITIS: A SINGLE-CENTER EXPERIENCE

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Introduction: Early identification of steroid failure in acute severe ulcerative colitis is crucial to guide timely therapeutic escalation. The ADMIT-ASC score has been proposed as a simple

tool for early risk stratification.

Aim: To evaluate the performance of the ADMIT-ASC score in predicting steroid failure.

Methods: We conducted a retrospective study including 37 patients hospitalized for acute severe ulcerative colitis between 2020 and 2026 in the Gastroenterology department at Taher Maamouri Hospital in Nabeul, Tunisia. Steroid failure was defined according to Travis criteria. The predictive performance of an ADMIT-ASC score ≥ 2 was assessed using sensitivity, specificity, odds ratio (OR) and receiver operating characteristic (ROC) curve analysis.

Results: Our cohort included 59.5% men and 40.5% women, with a mean age of 39 years. The mean Lichtiger score was 10 ± 2.5 . Endoscopic signs of severity were observed in 59.5% of cases. Steroid failure occurred in 51.3% of patients, and colectomy was required in 11 cases (29.7%). An ADMIT-ASC score ≥ 2 was observed in 75.7% of patients. The sensitivity and specificity for predicting steroid failure were 78.9% and 27.8%, respectively. The odds ratio was 1.44 (95% CI: 0.31–6.63). ROC curve analysis showed limited discriminative ability, with an AUC of 0.53. Patients with ADMIT-ASC ≥ 2 had a slightly higher rate of treatment failure compared to those with lower scores (53.6% vs 44.4%).

Conclusion: In this real-life cohort, the ADMIT-ASC score demonstrated high sensitivity but poor specificity, with overall limited predictive performance. These findings should be interpreted with caution given the small sample size, and the retrospective design, which may have reduced the discriminative capacity of the score.

P-26: LATE-STAGE DIAGNOSIS OF HEPATOCELLULAR CARCINOMA: INSIGHTS FROM A NORTH AFRICAN COHORT

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Introduction: Hepatocellular carcinoma (HCC) remains a major cause of cancer-related mortality worldwide, with prognosis largely determined by stage at diagnosis. Data from North African populations are limited. This study aimed to evaluate the stage at diagnosis of HCC and identify factors associated with advanced disease in a real-world cohort.

Methods: We conducted a retrospective study including consecutive patients diagnosed with HCC in the gastroenterology department in Nabeul, Tunisia. Clinical, biological, and radiological data were collected. Tumor stage was classified according to the Barcelona Clinic Liver Cancer (BCLC) system. Advanced-stage HCC was defined as BCLC stages B, C, or D. Univariate analyses were performed to identify factors associated with advanced disease.

Results: A total of 98 patients were included, with a mean age of 69.7 ± 9.5 years and a male predominance (66.3%). Most patients had preserved liver function (Child-Pugh A: 55.7%). At diagnosis, only 20.6% of patients were classified as BCLC stage A, while 32.0%, 9.3%, and 38.1% were at stages B, C, and D, respectively, indicating that nearly half of the patients (47.4%) were diagnosed at advanced stages (BCLC C–D). During follow-up, overall mortality reached 76.5%.

Advanced-stage HCC was significantly associated with non-alcohol-related liver disease ($p=0.001$) and undetermined etiology ($p=0.011$). Patients with advanced disease had a higher neutrophil-to-lymphocyte ratio (3.4 ± 2.4 vs 1.8 ± 0.7 , $p<0.05$) and a lower body mass index (26 ± 3 vs 31 ± 7 kg/m², $p<0.05$). The delay between cirrhosis diagnosis and HCC occurrence was

significantly shorter in advanced stages (8.6 ± 18 vs 39.5 ± 54.5 months, $p<0.05$). Portal vein invasion was also more frequent in advanced stages ($p=0.014$). No significant association was found between alpha-fetoprotein levels and tumor stage.

Conclusion: In this North African cohort, HCC is frequently diagnosed at advanced stages, reflecting gaps in early detection. Markers such as elevated neutrophil-to-lymphocyte ratio, lower BMI, and shorter cirrhosis-to-HCC interval may identify patients with more aggressive disease. These findings highlight the need to improve surveillance strategies to enable earlier diagnosis and better outcomes.

P-27: GALLSTONE DISEASE AND PREGNANCY: DIAGNOSTIC CHALLENGES, RISK OF COMPLICATIONS, AND MANAGEMENT

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Introduction: Gallstone disease is the most common biliary disorder during pregnancy, affecting 3–12% of pregnant women. Pregnancy promotes gallstone formation through progesterone-induced biliary stasis and cholesterol supersaturation. It may be complicated by acute cholecystitis, cholangitis, biliary pancreatitis, or acute cholangitis, with specific maternal and fetal implications. Our objective was to describe the clinical characteristics and complications of gallstone disease during pregnancy and to evaluate therapeutic strategies.

Methods: This was a retrospective study conducted between 2018 and 2025, including all pregnant women with symptomatic gallstone disease confirmed by ultrasound. Collected data included the trimester of onset, type of complication, medical or surgical management, timing of intervention, and obstetric outcomes.

Results: Sixty-seven cases were identified. Uncomplicated biliary colic was the most common presentation (60%). Complications included acute cholecystitis (18%), biliary pancreatitis (12%), acute cholangitis (6%), and cholangitis (5%). Conservative management was successful in 69% of cases. Laparoscopic cholecystectomy during pregnancy was performed in 13 patients (19%), mainly during the second trimester. Three cases of preterm delivery were reported following surgery, representing 23% of operated patients.

Conclusion: Symptomatic gallstone disease during pregnancy requires management tailored to the gestational trimester and clinical severity. Laparoscopic cholecystectomy during the second trimester is a valid therapeutic option in cases of failure of conservative management.

P-28: HEPATITIS C IN PREGNANCY: WHAT WE LEARN FROM A TUNISIAN HOSPITAL COHORT

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Introduction: Hepatitis C virus (HCV) infection complicates approximately 1–3% of pregnancies worldwide. In Tunisia, its prevalence among women of reproductive age is estimated at 0.5–1%. Mother-to-child transmission (MTCT) of HCV occurs in approximately 5–10% of cases, with no proven prophylactic intervention currently available, unlike hepatitis B. The recent availability of direct-acting antivirals (DAAs) has raised the question of antiviral treatment during pregnancy. The objective of this study was to analyze the epidemiological profile of HCV-positive pregnant women in our department, estimate the rate of mother-to-child transmission, and discuss therapeutic perspectives.

Methods: We conducted a retrospective study between 2017 and 2025, including all women with chronic HCV infection, confirmed by positive anti-HCV antibodies and detectable HCV RNA. The parameters analyzed included viral genotype, viral load, mode of delivery, breastfeeding, and serological follow-up, as well as HCV RNA testing in newborns until 18 months of age.

Results: Fifty-two anti-HCV-positive women were identified, corresponding to a prevalence of 1.08%. HCV RNA was detectable in 39 patients (75%), with a predominance of genotype 1b (64.1%). Thirty-one infants underwent complete follow-up until 18 months of age. The mother-to-child transmission rate was 9.7% (3/31). No significant difference in transmission rate was observed according to the mode of delivery (vaginal delivery versus cesarean section; $p = 0.74$). Similarly, breastfeeding was not associated with an increased risk of transmission.

Conclusion: HCV-positive pregnancy requires maternal virological monitoring and appropriate delayed serological screening of exposed infants. Preconception treatment with DAAs should be systematically offered to HCV-infected women of reproductive age.

P-29: SPLENIC ENLARGEMENT IN INFLAMMATORY BOWEL DISEASE: PREVALENCE AND ASSOCIATED FACTORS

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Introduction: The spleen is a major secondary lymphoid organ involved in systemic immune responses and may enlarge in chronic inflammatory conditions. In inflammatory bowel disease (IBD), previous imaging studies have suggested an association between splenic enlargement and inflammatory burden, although available findings remain inconsistent.

We aimed to assess splenic volume in patients with IBD and to investigate its associations with age, body mass index (BMI), disease activity and inflammatory markers.

Methods: We conducted a retrospective single-centre study of inflammatory bowel disease (IBD) patients (2018–2026) who underwent abdominal CT. Splenic volume was estimated using a modified ellipsoid formula ($L \times W \times H \times 0.523$). Volumetric splenomegaly was defined as volume >314 mL; longitudinal splenomegaly as length >130 mm. Clinical activity was assessed by Harvey–Bradshaw Index (HBI) in Crohn's disease (remission <5 , active ≥ 5) and Mayo score in ulcerative colitis (remission ≤ 2 , active >2). Associations of splenic volume with age, BMI, clinical activity, CRP, albumin, neutrophil-to-lymphocyte ratio (NLR),

platelet-to-lymphocyte ratio (PLR) and CRP-to-albumin ratio (CAR) were analysed using non-parametric tests and Spearman correlation.

Results: Fifty-four patients were included, including 45 with CD (83%) and 9 with UC (17%). Mean age was 41.6 ± 13.6 years, with a male-to-female ratio of 5.5. Mean BMI was 24.4 ± 4.8 kg/m², and median disease duration was 3.5 years (IQR 1.0–11.0). At the time of imaging, 5.8% of patients were in clinical remission and 94.2% had active disease.

Mean estimated splenic volume was 361.6 ± 319.7 mL, with a median of 290.8 mL (IQR 171.8–436.5). Volumetric splenomegaly was identified in 44.4% of patients whereas longitudinal splenomegaly was present in only 18.5%. Splenic length therefore failed to identify 14 patients classified as having splenomegaly by volumetric assessment.

Splenic volume was positively correlated with BMI ($r=0.28$, $p=0.045$) and negatively correlated with age ($r=-0.34$, $p=0.013$). In contrast, no association was found with clinical disease activity, as estimated splenic volume did not differ significantly across activity categories ($p=0.36$). Similarly, splenic volume was not correlated with inflammatory or haematological markers, including CRP ($r=0.02$, $p=0.88$), serum albumin ($r=0.05$, $p=0.74$), NLR ($r=-0.06$, $p=0.66$), PLR ($r=-0.13$, $p=0.37$), or CAR ($r=0.01$, $p=0.94$).

Conclusion: Volumetric splenomegaly was common in this IBD cohort and was detected substantially more frequently by volume-based assessment than by splenic length alone. In contrast, splenic volume was not associated with contemporaneous clinical activity or systemic inflammatory markers. The observed associations with BMI and age highlight the importance of accounting for demographic and body-size-related factors when interpreting splenic volume. Further evaluation of body size-adjusted indices, such as the splenic volume-to-BMI ratio, may help clarify the relationship between splenic enlargement and inflammatory activity in IBD.

P-30: WHEN PAIN INDICATES MORE: ABDOMINAL PAIN AS A RED FLAG IN HEPATOCELLULAR CARCINOMA

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Introduction: Hepatocellular carcinoma (HCC) is a major complication of cirrhosis and may be diagnosed at an advanced stage despite surveillance. Abdominal pain (AP), although common, remains poorly investigated as a potential marker of tumor aggressiveness. This study assessed the prevalence of AP in patients with HCC and its association with clinical, biological, and tumor-related features.

Methods: We conducted a retrospective monocentric study including cirrhotic patients diagnosed with HCC between 2019 and 2024. Clinical and biological data were collected, along with tumor characteristics, alpha-fetoprotein (AFP) levels, Barcelona Clinic Liver Cancer (BCLC) stage, and treatment modalities. Factors associated with AP were analyzed.

Results: Sixty-two patients were included, with a mean age of 66 years and a male-to-female ratio of 1.05. Cirrhosis was viral in 80.6% of cases. HCC was the initial presentation of cirrhosis in 35.5%. A solitary tumor was found in 41.9%, while 35.5% of patients had advanced BCLC stage C or D disease. Locoregional invasion and distant metastases were observed in 25.8% and 8% of patients, respectively. AP was reported in 24.2% of patients and was significantly associated with poor performance status ($p=0.003$), higher tumor number ($p=0.023$), larger tumor size ($p=0.019$), locoregional invasion ($p<0.001$), and elevated AFP

levels ($p=0.03$).

Conclusion: Abdominal pain affected nearly one in four patients with HCC and was associated with several markers of greater tumor burden and aggressiveness. AP may therefore represent a simple clinical warning sign of more advanced disease and should prompt careful tumor assessment.

P-31: CLINICAL AND PROGNOSTIC VALUE OF THE GERIATRIC NUTRITIONAL RISK INDEX IN CIRRHOSIS

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Introduction: Malnutrition is common in patients with cirrhosis and contributes to the development of complications, muscle wasting, and increased mortality. The Geriatric Nutritional Risk Index (GNRI) is a simple nutritional index combining serum albumin and the ratio of actual to ideal body weight. Although initially developed in older populations, its prognostic value has been increasingly explored in chronic diseases. However, data regarding its clinical and prognostic relevance in cirrhosis, particularly in patients with advanced disease, remain limited. We aimed to assess the ability of the GNRI to predict overall mortality and its association with major complications of cirrhosis.

Methods: We conducted a retrospective single-centre cohort study including patients with cirrhosis followed between 2014 and 2026. The GNRI was calculated at baseline using the following formula: $GNRI = 1.489 \times \text{serum albumin (g/L)} + 41.7 \times (\text{actual body weight/ideal body weight})$, with the weight ratio capped at 1. Patients were classified into two groups: major nutritional risk (GNRI <82) and moderate, low, or no nutritional risk (GNRI ≥82). The primary outcome was all-cause mortality. Secondary outcomes included ascites, refractory ascites, hepatic encephalopathy (HE), portal hypertension-related gastrointestinal bleeding, and hepatocellular carcinoma (HCC). Associations between nutritional risk and liver-related complications were assessed using lo

Results: A total of 72 patients were included, with a mean age of 64.0 ± 10.2 years and a male-to-female ratio of 1.4. The main causes of cirrhosis were metabolic dysfunction-associated steatotic liver disease (23.9%), chronic hepatitis B (21.1%), chronic hepatitis C (19.7%), and alcohol-related liver disease (16.9%). Cirrhosis was classified as Child-Pugh A, B, and C in 27.8%, 38.9%, and 31.9% of patients, respectively. Median MELD score was 17 [12–24]. Mean GNRI was 84.2 ± 10.2 , and 54 patients (74.0%) had major nutritional risk.

Major nutritional risk was significantly associated with ascites (OR = 7.19; 95% CI : 2.18–23.74 ; $p = 0.001$) and refractory ascites (OR = 11.69; 95% CI : 1.45–94.36 ; $p = 0.021$). A higher frequency of HE (OR 3.68; 95% CI 0.76–17.81 ; $p = 0.106$) and HCC (OR 4.34; 95% CI 0.90–20.93 ; $p = 0.067$) was also observed among patients with major nutritional risk, although these associations did not reach statistical significance. No significant association was found with portal hypertension-related gastrointestinal bleeding (OR 2.29; $p = 0.312$).

During a median follow-up of 37.5 months, overall mortality was 22.2%. Kaplan–Meier analysis showed numerically poorer overall survival in patients with GNRI <82 compared with those with GNRI ≥82, although the difference was not statistically significant (log-rank $p=0.26$). Similarly, in univariable Cox

regression, major nutritional risk was associated with a higher but non-significant risk of mortality (HR 2.80; 95% CI 0.64–12).

Conclusion: A GNRI <82 identified patients with cirrhosis at substantially higher risk of ascites and refractory ascites. Associations with hepatic encephalopathy, HCC, and overall mortality showed similar trends but did not reach statistical significance, possibly because of the limited sample size and number of events. As a simple index derived from routinely available parameters, the GNRI may help identify patients with cirrhosis who warrant closer nutritional assessment and monitoring. Larger prospective studies are needed to determine its independent prognostic value and to establish the most appropriate GNRI threshold in cirrhosis.

P-32: CA19-9 VS THE CA19-9-TO-BILIRUBIN RATIO IN PANCREATIC ADENOCARCINOMA: GREATER PROGNOSTIC VALUE ?

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Introduction: CA19-9 is the most widely used serum biomarker in pancreatic adenocarcinoma. However, its interpretation may be affected by cholestasis, particularly in patients with biliary obstruction. The CA19-9-to-bilirubin ratio has therefore been proposed as a means of reducing the influence of hyperbilirubinemia and potentially providing a more accurate reflection of tumor burden.

We aimed to compare CA19-9 and the CA19-9-to-bilirubin ratio in terms of their association with tumor stage and their prognostic performance for metastatic disease, 6-month mortality, and overall survival.

Methods: We conducted a retrospective single-centre study of patients with pancreatic adenocarcinoma managed between 2015 and 2026. Baseline serum CA19-9 and total bilirubin were recorded, and the CA19-9-to-bilirubin ratio calculated. Associations with tumor stage were assessed using non-parametric tests and Spearman's correlation. Discrimination for metastatic disease and 6-month mortality was evaluated by ROC curve analysis. Overall survival was assessed using Kaplan-Meier and Cox regression, with multivariable analyses adjusted for tumor stage and WHO performance status. The incremental prognostic value of the ratio was assessed using the C-index.

Results: Forty patients were included with a mean age of 63.0 ± 11.6 years, and 75% were men. At diagnosis, pancreatic adenocarcinoma was resectable in 35% of patients, locally advanced in 25%, and metastatic in 40%. During follow-up, 33 patients (82.5%) died, and median overall survival was 7 months. Median CA19-9 level was 285 U/mL, with a mean of 1450 ± 2890 U/mL, while the median CA19-9-to-bilirubin ratio was 8.5, with a mean of 48.2 ± 95.6 . Both CA19-9 and the CA19-9-to-bilirubin ratio increased with advancing tumor stage. The correlation with tumor stage was significant for both markers and was numerically stronger for the CA19-9-to-bilirubin ratio (Spearman's $\rho=0.377$; $p=0.017$) than for CA19-9 alone ($\rho=0.354$; $p=0.025$). For the identification of metastatic disease, the AUROC was 0.711 for the CA19-9-to-bilirubin ratio and 0.693 for CA19-9, with no significant difference between the two markers ($p=0.682$). For 6-month mortality, CA19-9 yielded an AUROC of 0.55, compared with 0.45 for the CA19-9-to-bilirubin ratio, with no significant difference between the two markers ($p=0.705$). In Cox regression analysis, neither CA19-9 (HR 1.23; 95% CI 0.87–1.74; $p=0.239$) nor the CA19-9-to-bilirubin ratio (HR 1.06; 95% CI 0.82–1.38; $p=0.654$) was

significantly associated with overall survival. After adjustment for tumor stage and WHO performance status, addition of the CA19-9-to-bilirubin ratio did not significantly improve model discrimination (C-index 0.679 vs 0.674; $p=0.429$).

Conclusion: The CA19-9-to-bilirubin ratio was associated with tumor stage and showed slightly higher discrimination for metastatic disease than CA19-9 alone, although the difference was not statistically significant. Neither marker showed useful discrimination for 6-month mortality or independently predicted overall survival. Moreover, adding the CA19-9-to-bilirubin ratio to a model incorporating tumor stage and WHO performance status did not improve prognostic discrimination. These findings do not support a clear prognostic advantage of the CA19-9-to-bilirubin ratio over CA19-9 alone in pancreatic adenocarcinoma and should be confirmed in larger cohorts.

P-33: BLOOD-DERIVED INFLAMMATORY INDICES IN ULCERATIVE COLITIS: ASSOCIATION WITH DISEASE ACTIVITY

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Introduction: Simple blood-derived inflammatory indices have emerged as accessible biomarkers of disease activity in ulcerative colitis (UC). By integrating circulating immune cell populations and serum albumin, these indices may reflect systemic inflammatory burden using routinely available laboratory parameters.

We aimed to assess the association of the systemic immune-inflammation index (SII), neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), and neutrophil percentage-to-albumin ratio (NPAR) with endoscopic disease activity and to evaluate their ability to identify severe endoscopic activity in UC.

Methods: We conducted a retrospective single-centre study including patients hospitalized with UC between 2018 and 2026. Disease activity was assessed using the Mayo score, and severe endoscopic activity was defined as a Mayo endoscopic subscore (MES) of 3. SII was calculated as platelet count $\times$ neutrophil count / lymphocyte count, NLR as neutrophil count / lymphocyte count, PLR as platelet count / lymphocyte count, and NPAR as neutrophil percentage / serum albumin. Receiver operating characteristic (ROC) curve analysis was performed to evaluate the ability of each index to discriminate severe endoscopic activity. Statistical analyses were performed using SPSS version 26.0, with $p<0.05$ considered statistically significant.

Results: A total of 56 patients were included, with a mean age of 45.4 ± 15.7 years and a male-to-female ratio of 2.3. Median disease duration was 6.5 years (IQR 2–15), and median total Mayo score was 5.5 (IQR 3–8). MES was 0 in 7.1% of patients, 1 in 7.1%, 2 in 48.2%, and 3 in 37.5%. Median SII, NLR, PLR, and NPAR values were 1516.5 (IQR 650.5–3275.3), 2.92 (IQR 2.17–4.28), 176.1 (IQR 129.0–264.0), and 1.84 (IQR 1.54–2.36), respectively.

Patients with severe endoscopic activity had significantly higher SII values than those with MES <3 (3030 [IQR 1855.9–5210.4] vs 770.8 [IQR 520.0–1516.5]; $p<0.001$). NLR was also significantly higher in patients with severe activity (4.47 vs 2.36 ; $p<0.001$), as were PLR (233.3 [IQR 172.3–420.8] vs 145.7 [IQR 116.4–190.1]; $p<0.001$) and NPAR (2.48 [IQR 1.99–2.85] vs 1.60 [IQR 1.41–1.84]; $p<0.001$).

For identifying severe endoscopic activity, NPAR showed the

highest discriminative performance, with an AUROC of 0.92 (95% CI 0.83–0.98), followed by SII (AUROC 0.86), NLR (AUROC 0.84), and PLR (AUROC 0.81). An optimal NPAR cut-off of 1.93 yielded a sensitivity of 90.5%, specificity of 82.9%, positive predictive value of 76.0%, and negative predictive value of 93.5%.

Conclusion: Blood-derived inflammatory indices were strongly associated with endoscopic disease activity in patients with UC. Among the evaluated indices, NPAR showed the strongest correlation with endoscopic severity and the highest discriminative ability for MES 3. Given its simplicity and reliance on routinely available laboratory parameters, NPAR may represent a useful adjunct for identifying patients at increased likelihood of severe endoscopic activity. Prospective validation is required before its use as a substitute for direct endoscopic assessment.

P-34: MYOSTEATOSIS IN INFLAMMATORY BOWEL DISEASE : PREVALENCE AND ASSOCIATED FACTORS

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Introduction: Altered muscle composition is increasingly recognized in inflammatory bowel disease (IBD), but myosteatorsis remains less extensively studied than loss of muscle mass. We aimed to determine the prevalence of myosteatorsis in patients with IBD and to identify clinical, nutritional, and inflammatory factors associated with this muscle phenotype.

Methods: We conducted a retrospective single-centre study of patients followed for IBD (2018–2026) who underwent abdominal CT. Demographic, clinical, and biological data were collected. Disease activity was assessed using the Harvey–Bradshaw Index (HBI) in Crohn's disease (CD) and the Simple Clinical Colitis Activity Index (SCCAI) in ulcerative colitis (UC). Bilateral psoas muscles were manually segmented on a single axial CT image at the third lumbar vertebral level using Weasis DICOM Viewer; mean attenuation was expressed in Hounsfield units (HU). Myosteatorsis was defined as mean attenuation <41 HU if BMI <25 kg/m², and <33 HU if BMI $\geq$ 25 kg/m². Factors associated with myosteatorsis were assessed by univariate and multivariable logistic regression.

Results: Fifty-four patients were included, including 45 with CD (83%) and 9 with UC (17%). Mean age was 41.6 ± 13.6 years, the male-to-female ratio was 5.5, and mean BMI was 24.4 ± 4.8 kg/m². Median disease duration was 3.5 years (IQR 1.0–11.0). At the time of CT, 94.2% of patients had clinically active disease. Mean C-reactive protein level was 48.2 ± 61.7 mg/L and mean serum albumin was 36.8 ± 5.6 g/L. Myosteatorsis was present in 15 patients (27.7%). Patients with myosteatorsis had a significantly lower BMI than those without myosteatorsis (22.5 ± 6.1 vs 25.2 ± 4.0 kg/m²; $p=0.03$) and lower serum albumin levels (34.4 ± 6.3 vs 37.7 ± 5.1 g/L; $p=0.05$). They also showed a trend toward longer disease duration (11 vs 3 years; $p=0.08$) and a higher frequency of complicated disease phenotype (46.7% vs 18.9% ; $p=0.08$). Myosteatorsis was not significantly associated with CRP level, IBD subtype, previous intestinal surgery, or corticosteroid exposure. In multivariable analysis, BMI remained the only factor independently associated with myosteatorsis (OR 0.80 per kg/m², 95% CI 0.67–0.95; $p=0.01$).

Conclusion: Myosteatorsis was observed in nearly one-third of patients with IBD and was independently associated with lower BMI. Its association with lower albumin levels and the observed

trends toward longer disease duration and more complicated disease suggest a relationship with impaired nutritional and body-composition status rather than with contemporaneous systemic inflammation alone. Opportunistic assessment of muscle attenuation on routinely performed abdominal CT may provide additional information on nutritional vulnerability in patients with IBD.

P-35: THE MEDICATION ADHERENCE CHALLENGE IN INFLAMMATORY BOWEL DISEASE: REAL-WORLD EVIDENCE

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Introduction: Maintaining long-term medication adherence is a cornerstone of effective IBD management. Therefore, understanding the determinants of adherence in real-world settings is essential to identify vulnerable patients and develop tailored interventions. We aimed to evaluate medication adherence among Tunisian patients with IBD and identify factors associated with adequate adherence.

Methods: We conducted a cross-sectional study in the Department of Gastroenterology, Ibn Al Jazzar University Hospital, Kairouan, Tunisia, including patients assessed between January 1, 2023, and June 30, 2026. Sociodemographic and clinical characteristics, disease-related variables and treatment history were collected. Medication adherence was assessed using the 8-item Morisky Medication Adherence Scale. A score of 8 indicated high adherence, 6 to <8 medium adherence and <6 low adherence. Adequate adherence was defined as a Morisky Medication Adherence Scale-8 score ≥ 6 . Factors associated with adherence were explored using univariate analyses.

Results: Sixty patients were included. The study population had a mean age of 42.1 ± 12.6 years; 58.3% were male, and Crohn's disease accounted for 68.3% of cases. The Morisky scores were available for 56 patients. The mean Morisky score was 6.19 ± 2.53 . High, medium and low adherence were observed in 32 (57.1%), 6 (10.7%) and 18 patients (32.1%), respectively. Overall, 38 patients (67.9%) had a Morisky score ≥ 6 . Adequate adherence was significantly associated with non-smoking status ($p=0.023$) and a history of IBD-related surgery ($p=0.021$). No significant association was found with the other studied sociodemographic or clinical characteristics.

Conclusion: Although most patients showed at least moderate medication adherence, nearly one-third had low adherence. Identifying factors associated with adherence may help recognize patients requiring closer monitoring and support tailored strategies to optimize long-term treatment adherence.

GYNÉCOLOGIE-OBSTÉTRIQUE

P-36: DEEP INFILTRATING ENDOMETRIOSIS IN INFERTILE WOMEN: IMPACT ON QUALITY OF LIFE

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Introduction: Deep infiltrating endometriosis is a condition characterized by the invasion of organs other than the uterus at

a depth greater than 5 mm by endometrium-like tissue.

When associated with infertility, quality of life may be severely altered.

Our primary aim was to evaluate the impact of deep endometriosis on quality of life of women experiencing infertility.

Methods: We conducted a prospective comparative cross-sectional study that enrolled women with a history of infertility that were divided into two study populations based on the presence or absence of deep infiltrating endometriosis (DIE): a DIE group ($n = 27$) and a non-DIE group ($n = 54$).

Patients were invited to complete the FertiQoL questionnaire, and the resulting scores were subsequently compared.

Continuous variables were compared using the Mann-Whitney U test, while categorical variables were analyzed using the chi-square test. A significance level of 0.05 was set.

Results: First, we performed a between-group comparison of all FertiQoL modules and domains. Only the comparative analysis of the overall Treatment module score showed a significant difference between the two cohorts (Table 1).

Afterwards, we performed an ultimate evaluation of the total FertiQoL score, which differed significantly between the two populations ($p = 0.002$), with a higher proportion of severe impairment in the non-DIE group.

Conclusion: In the present study, infertile women without deep endometriosis exhibited a slight impairment in quality of life. Therefore, a thorough evaluation of the quality of life of patients appears to be crucial at each gynecological consultation.

P-37: WOMEN'S KNOWLEDGE OF POLYCYSTIC OVARY SYNDROME: GAPS, DETERMINANTS, AND INFORMATION NEEDS

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Introduction: Polycystic ovary syndrome (PCOS) is a common endocrine-metabolic disorder with reproductive, metabolic, and psychological consequences. Adequate patient knowledge is essential for early recognition, appropriate care, and long-term risk prevention. The aim of this study was to assess women's knowledge of PCOS, identify major knowledge gaps and associated factors, and explore their information needs.

Methods: We conducted a descriptive cross-sectional online survey among adult women using an anonymous bilingual French-Arabic questionnaire. Knowledge was assessed using a 16-item score and classified as poor (0–5), moderate (6–11), or good (12–16). Factors associated with knowledge scores were explored using comparative statistical analyses, with $p < 0.05$ considered significant.

Results: Among 142 participants, 93.0% had previously heard of PCOS and 33.8% reported a physician-confirmed diagnosis. The mean knowledge score was $12.13 \pm 4.22/16$, and 66.2% had good knowledge. Important gaps remained: only 53.5% knew that spontaneous pregnancy is possible, 54.9% recognized that diagnosis is not based solely on ultrasound, and 60.6% were aware of the increased risk of diabetes. Medical/paramedical participants had significantly higher scores than others (14.58 ± 1.86 vs 10.22 ± 4.57 ; $p < 0.001$). Women with physician-diagnosed PCOS also had higher scores than undiagnosed participants (14.38 vs 10.64 ; $p = 0.002$). Social media were the leading information source (50.7%), while 87.3% requested further information.

Conclusion: Despite relatively high overall PCOS awareness,

clinically relevant gaps persist, particularly regarding diagnosis, fertility, and metabolic risk. Targeted, medically validated education should complement clinical counseling and digital health information.

P-38: FETAL MACROSOMIA: RISK FACTORS, MATERNAL AND NEONATAL MORBIDITY – A TUNISIAN CASE SERIES

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Introduction: Fetal macrosomia—defined as a birth weight exceeding 4000 g—is a true obstetric puzzle. Behind this "big baby" lie serious, often preventable risks: postpartum hemorrhage, severe perineal tears, and shoulder dystocia for the mother, and birth trauma, hypoglycemia, and respiratory distress for the newborn. With rising obesity and gestational diabetes rates in Tunisia, identifying at-risk profiles has never been more urgent. The aim of this study was to determine the risk factors for fetal macrosomia and analyze the associated maternal and neonatal morbidity in a Tunisian maternity setting.

Methods: We conducted a retrospective case-control study including 400 delivery records (January 2022 – December 2025). Cases (n=200) were newborns weighing ≥ 4000 g. Controls (n=200) were newborns weighing 2500–3999 g, matched for gestational age and sex. We collected maternal data (age, BMI, gestational diabetes, weight gain, parity, prior macrosomia), delivery details, and maternal/neonatal complications. Logistic regression analyses were performed.

Results: Independent risk factors for macrosomia were: maternal pre-gestational BMI ≥ 30 kg/m² (OR 3.1; 95% CI 2.1–4.5), gestational diabetes (OR 2.8; 95% CI 1.9–4.2), and excessive weight gain > 18 kg (OR 2.5; 95% CI 1.7–3.6). In the macrosomic group, rates of cesarean section (62.0% vs 28.0%; $p<0.001$), shoulder dystocia (8.5% vs 1.5%; $p=0.002$), postpartum hemorrhage (16.0% vs 5.0%; $p<0.001$), and severe perineal tears (5.5% vs 1.0%; $p=0.01$) were significantly higher. Neonatal outcomes were equally concerning: hypoglycemia (28.0% vs 4.5%; $p<0.001$), respiratory distress (12.0% vs 4.0%; $p=0.004$), and NICU admissions (22.0% vs 6.0%; $p<0.001$) were strikingly more frequent.

Conclusion: Macrosomia places a heavy burden on both mothers and newborns, with complications that are largely avoidable. Targeted screening for gestational diabetes and obesity, combined with personalized obstetric planning—particularly regarding delivery route—is essential to reduce this burden in Tunisia.

P-39: BEYOND NAUSEA: LIVER INVOLVEMENT IN HYPEREMESIS GRAVIDARUM

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Introduction: Hyperemesis gravidarum (HG) complicates 0.3–3% of pregnancies and may be associated with hepatic

cytolysis in 15–25% of severe cases. Its pathophysiology involves centrilobular steatosis related to malnutrition, as well as hormonal abnormalities involving human chorionic gonadotropin (hCG) and estrogen. Although this hepatic involvement is generally self-limiting, it remains poorly documented in North African populations. Our objective was to determine the prevalence of hepatic involvement in patients with hyperemesis gravidarum and to identify its predictive factors.

Methods: We conducted a retrospective analytical study (2020–2025) including patients hospitalized for HG, defined by a Pregnancy-Unique Quantification of Emesis (PUQE) score of thirteen or higher, with urinary ketonuria exceeding two plus. Hepatic involvement was defined as an elevation of alanine aminotransferase (ALT) and/or aspartate aminotransferase (AST) above the upper limit of normal (ULN). Univariate and multivariate analyses were performed to identify factors associated with hepatic involvement.

Results: A total of 147 patients were included, with a mean age of 26.8 ± 4.7 years. Hepatic involvement was observed in 31 cases (21.1%). The median ALT level was $4.2 \times \text{ULN}$ [$2.8\text{--}7.4 \times \text{ULN}$]. On multivariate analysis, independent predictors of hepatic involvement were an hCG level $>150,000$ IU/L (OR = 3.2; 95% CI [1.4–7.3]), hypoalbuminemia <30 g/L (OR = 2.9; 95% CI [1.2–6.8]), and multiple pregnancy (OR = 4.1; 95% CI [1.7–9.9]). Liver function tests normalized in 96.8% of cases following rehydration.

Conclusion: Hepatic involvement is a frequent complication of HG. Its occurrence appears to be related to disease severity and to the metabolic consequences of malnutrition and dehydration. Early identification of predictive factors may allow better risk stratification and more appropriate management.

P-40: PREECLAMPSIA AND LIVER DYSFUNCTION: BEYOND HELLP SYNDROME

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Introduction: Preeclampsia (PE) is a systemic disorder affecting multiple organs, including the liver. Although HELLP syndrome represents its best-known hepatic manifestation, moderate hepatic cytolysis may occur in 20–30% of patients with severe PE without meeting the full diagnostic criteria for HELLP syndrome. This sub-HELLP hepatic dysfunction remains understudied, and its prognostic implications are not yet well established. Our objective was to assess the prevalence and characteristics of hepatic dysfunction in patients with severe non-HELLP preeclampsia and to determine its prognostic value.

Methods: We conducted a retrospective study between 2019 and 2025, including 102 cases of severe preeclampsia hospitalized according to the 2013 ACOG criteria. Patients with complete HELLP syndrome were excluded. Sub-HELLP hepatic dysfunction was defined as an elevation of transaminases (ALT/AST >2 times the upper limit of normal) or the presence of epigastric pain associated with an LDH level >600 IU/L. Maternal and fetal outcomes were compared between patients with and without hepatic involvement.

Results: Sub-HELLP hepatic dysfunction was present in 28 cases (28%). Patients with hepatic dysfunction had an earlier gestational age at diagnosis (30 vs. 33 weeks of gestation; $p = 0.001$), more severe proteinuria ($p = 0.002$), and a higher rate of

preterm birth (79% vs. 51%; $p = 0.01$). Maternal mortality was 7% in the hepatic dysfunction group compared with 1% in the control group ($p = 0.08$).

Conclusion: Hepatic dysfunction in severe non-HELLP preeclampsia is common and associated with increased morbidity. Early and systematic monitoring of hepatic function should be incorporated into the management protocol for severe preeclampsia.

P-41: PREDICTORS OF RECURRENCE AND REPRODUCTIVE SUCCESS AFTER ENDOMETRIOMA SURGERY

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Introduction: Ovarian endometriosis represents a therapeutic challenge, particularly in resource-limited settings.

This study aimed to identify prognostic factors for recurrence and reproductive success after endometrioma surgery.

Methods: We conducted a retrospective study including 50 patients who underwent surgery for ovarian endometrioma between 2018 and 2023. Demographic, clinical, and surgical data were collected. Multivariable logistic regression was used to identify factors independently associated with recurrence and reproductive success. Ovarian reserve was assessed by measuring anti-Müllerian hormone (AMH) levels.

Results: The mean age of the patients was 33.4 ± 6.6 years, and 68% were infertile. Fenestration combined with electrocoagulation significantly increased the risk of recurrence compared with complete cystectomy ($OR = 5.2$; $p = 0.002$). A revised American Society for Reproductive Medicine (rASRM) score >70 was also an independent predictor of recurrence ($OR = 3.8$; $p = 0.008$). Cystectomy significantly reduced the recurrence rate (17.4% vs. 54.5%; $p = 0.026$), but was associated with a greater reduction in postoperative AMH levels (-0.6 ± 0.3 ng/mL vs. -0.3 ± 0.2 ng/mL; $p = 0.021$). The overall conception rate was 37.5%. Tubal patency ($OR = 5.8$; $p = 0.005$), age <35 years, and preoperative AMH >2 ng/mL were significantly associated with achieving pregnancy.

Conclusion: Surgical technique and the initial severity of endometriosis are the main determinants of recurrence risk. Despite a moderate impact on ovarian reserve, complete cystectomy significantly reduces the risk of recurrence and optimizes the chances of pregnancy. Comprehensive preoperative assessment remains essential to provide individualized management.

P-42: PREDICTIVE FACTORS OF TESTICULAR BIOPSY SUCCESS IN AZOOSPERMIA

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Introduction: Testicular biopsy is a crucial procedure in the management of azoospermia. Identifying preoperative factors associated with successful testicular biopsy may improve patient selection and counseling.

This study aimed to identify clinical, hormonal, and testicular factors predictive of successful testicular biopsy in patients with azoospermia.

Methods: A retrospective analytical study was conducted over a 5-year period (2017–2021), including 28 patients who underwent testicular biopsy for azoospermia. Clinical,

hormonal, and ultrasonographic parameters, as well as surgical characteristics, were collected. Success was defined as the presence of mature spermatozoa or maturing germ cells in the biopsy specimen. Comparative analysis and multivariable logistic regression were performed to identify factors associated with successful biopsy.

Results: Significant predictive factors of success included a testicular volume >12 mL ($p = 0.042$), low follicle-stimulating hormone (FSH) levels (<8 IU/L; $p = 0.002$), and lower estradiol levels ($p = 0.018$). An excretory type of azoospermia was also significantly associated with successful biopsy ($p = 0.023$). A unilateral surgical approach was associated with a higher success rate ($p = 0.005$). In contrast, clinical varicocele and hydrocele showed no significant association with biopsy outcome.

Conclusion: Our findings suggest that testicular volume, hormonal profile, type of azoospermia, and surgical approach may help predict successful testicular biopsy. These parameters could contribute to improved patient selection, preoperative counseling, and optimization of surgical strategies in assisted reproductive technology.

P-43: ULTRASOUND-GUIDED ASPIRATION VERSUS SURGERY FOR TUBO-OVARIAN ABSCESES

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Introduction: Tubo-ovarian abscess (TOA) is a severe complication of pelvic inflammatory disease that may require invasive management. While surgery has traditionally been the standard approach, transvaginal ultrasound-guided aspiration has emerged as a minimally invasive alternative in selected patients. This study was aimed to compare the efficacy and short-term outcomes of transvaginal ultrasound-guided aspiration and surgical management of TOA.

Methods: We conducted a five-year retrospective comparative study including 109 women admitted for TOA. Patients were divided into two groups according to treatment: ultrasound-guided aspiration ($n=43$) or surgery ($n=66$). Clinical and biological response, treatment success, complications, and length of hospital stay were compared between groups.

Results: Mean age was 28.9 years, and mean abscess size was 73.8 mm. Ultrasound-guided aspiration achieved a 97.7% success rate, with only one patient requiring subsequent surgery. Time to defervescence was significantly shorter after aspiration than after surgery (2.13 vs 3.44 days; $p=0.0019$). Pain improvement was more frequent after aspiration (92% vs 54%; $p=0.0013$), and inflammatory response improved more favorably ($p=0.0045$). No procedure-related complications occurred after aspiration, compared with 14.3% after surgery. Mean hospital stay was significantly shorter with aspiration (4.13 vs 6.06 days; $p=0.034$).

Conclusion: Transvaginal ultrasound-guided aspiration was associated with high treatment success, faster clinical recovery, fewer complications, and shorter hospitalization than surgery. In appropriately selected women with uncomplicated TOA, it may represent an effective minimally invasive treatment strategy.

HÉMATOLOGIE CLINIQUE

P-44: USE OF HUMAN PROTHROMBIN COMPLEX CONCENTRATE (PPSB) IN HOSPITAL PRACTICE

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Introduction: Human prothrombin complex concentrate (PPSB), a concentrate of vitamin K-dependent coagulation factors, is widely used in the management of severe hemorrhage. Its growing use in hospital settings, particularly in situations associated with direct oral anticoagulants (DOACs), warrants a rigorous evaluation of its prescribing patterns.

Methods: This retrospective descriptive study was conducted in the pharmacy department of a university hospital, from July 2025 to February 2026. All patients who received PPSB across the different hospital departments were included. Data were collected from the STKMED drug management software and from PPSB prescriptions issued by clinical departments. This study aimed to evaluate the use of PPSB in hospital practice, with particular focus on patients treated with DOACs.

Results: A total of 41 patients received PPSB, with a sex ratio of 1.2 and a mean age of 71 years. The emergency department was the leading prescriber (61%), followed by surgery (29%) and gastroenterology (7%). Indications were mainly hemorrhagic: digestive hemorrhage (41%) and preoperative emergencies (39%). DOACs were involved in 37% of cases, with off-label use of PPSB. Dosages ranged between 25 IU/kg (68%) and 50 IU/kg (32%), reflecting adaptation to clinical context and international recommendations.

Conclusion: PPSB plays a significant role in the management of severe hemorrhage, with a notable proportion of cases related to DOACs, despite these agents being considered safer than vitamin K antagonists. Greater awareness and harmonization of practices are essential to optimize the management of patients under DOACs.

P-45: NEUROHEMATOLOGICAL DISSOCIATION IN PERNICIOUS ANEMIA: AN UNDERRECOGNIZED PRESENTATION ASSOCIATED WITH

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Introduction: Pernicious anemia is traditionally characterized by macrocytic anemia; however, neurological symptoms may precede or occur independently of hematological abnormalities. This clinicobiological discordance remains underrecognized and may lead to delayed diagnosis and management.

To assess the prevalence and clinical profile of this dissociated presentation, defined by neurological manifestations in the presence of hemoglobin ≥ 12 g/dL.

Methods: We retrospectively analyzed 165 patients with confirmed pernicious anemia. Patients were stratified into two groups: those with neurohematological dissociation (Group A) and those with a conventional presentation (Group B). Demographic, clinical, and laboratory parameters were compared between groups.

Results: Neurological manifestations were documented in 94 patients (56.9%). A dissociated neurohematological profile was identified in 19 patients (11.5% of the overall cohort), representing 20.2% of patients with neurological manifestations. Compared with Group B, patients in Group A had higher hemoglobin levels (12.5 vs. 10.3 g/dL) and predominantly presented with isolated sensory symptoms, particularly paresthesia, without overt clinical features of

anemia. Symptom duration was longer in Group A (17.2 vs. 12.1 months), suggesting delayed recognition. Serum vitamin B12 levels did not differ significantly between groups.

Conclusion: This discordant presentation represents a clinically relevant and potentially misleading phenotype, affecting approximately one in five patients with neurological involvement. The absence of anemia should not exclude pernicious anemia in patients with suggestive neurological manifestations. Increased clinical awareness is essential to enable timely diagnosis and prevent potentially irreversible neurological damage.

P-46: CORRELATION BETWEEN ENDOSCOPIC, HISTOLOGICAL, AND IMMUNOLOGICAL FINDINGS IN PERNICIOUS ANEMIA

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Introduction: Pernicious anemia is an autoimmune atrophic gastritis resulting in vitamin B12 deficiency and potentially irreversible neurological complications. Its diagnosis relies on the integration of clinical, endoscopic, histological, and immunological findings. This study aimed to evaluate the association between immunological markers and endoscopic and histological features of pernicious anemia.

Methods: We conducted a retrospective study including 165 patients with confirmed pernicious anemia. Anti-parietal cell antibodies were assessed in all patients. Endoscopic and histological findings, including atrophic gastropathy, intestinal metaplasia, and neuroendocrine hyperplasia, were analyzed in relation to immunological findings.

Results: The study population included 111 women (67.5%) and 51 men (30.9%). Fatigue was reported in 93 patients (56.3%) and pallor in 51 (30.9%). Anti-parietal cell antibodies were positive in 150 patients (90.9%), while anti-intrinsic factor antibodies were positive in 39 (23.6%). All patients with positive anti-intrinsic factor antibodies had atrophic gastropathy on endoscopy. Neuroendocrine hyperplasia was identified in 12 patients, all of whom had positive anti-parietal cell antibodies; anti-intrinsic factor antibodies were positive in 24.5%. Among patients with intestinal metaplasia, 147 (89%) had positive anti-parietal cell antibodies, while 36 (21.8%) had positive anti-intrinsic factor antibodies.

Conclusion: Anti-parietal cell antibodies were highly prevalent in patients with pernicious anemia and were frequently associated with atrophic and metaplastic gastric lesions. The integration of immunological, endoscopic, and histological findings may improve diagnostic assessment and facilitate early identification of gastric complications.

P-47: BLOOD EXPOSURE KNOWLEDGE AND PRACTICES AMONG OPERATING-ROOM NURSES

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Introduction: Blood and body-fluid exposure accidents are a major occupational risk for operating-room nurses, carrying a risk of HIV, hepatitis B (HBV), and hepatitis C transmission. Tunisian data specific to this population remain limited. This study aimed to describe the knowledge, attitudes, and

practices related to blood exposure accidents among operating-room nurses and to identify associated factors.

Methods: A descriptive, cross-sectional study was conducted from January to March 2026 in two Tunisian centres: the operating theatre of the Military Hospital of Tunis and the surgical oncology department of the Salah Azaiez Institute. A 26-item structured questionnaire covering sociodemographic data, knowledge, attitudes, and practices was administered to operating-room nurses. Data were analysed using Microsoft Excel.

Results: Sixty-eight nurses responded. They were young (mean age 26.8 years) and predominantly male (66%), with 1–4 years' seniority in 65% of cases. Regarding knowledge, 90% correctly defined BBFE and 96% knew that reporting was mandatory. Concerning prevention, 47% recognised the protective role of HBV vaccination and 43% knew that double gloving reduces the risk of percutaneous exposure. More than half (59%) believed that knowing a patient's HIV status reduces the risk of exposure. Over half of the nurses (53%) had already sustained an exposure, most often by needlestick (59%). Needle recapping was reported by 73%, and HBV vaccination coverage reached 91%. Although 79% had received training, 77% requested further education.

Conclusion: Operating-room nurses showed satisfactory theoretical knowledge but notable gaps and persistent unsafe practices. Targeted, regularly updated training on standard precautions is warranted to reduce blood exposure accidents.

P-48: QUALITY OF LIFE IN PATIENTS WITH LYMPHOID HEMATOLOGIC MALIGNANCIES RECEIVING CHEMOTHERAPY: EXPERIENC

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Introduction: The diagnosis of hematological cancer can be a source of impairment of patients' quality of life due to prognostic uncertainty, the intensity of chemotherapy regimens, and their toxicities, which may interfere with patients' ability to cope with the disease. The aim of our study was to assess psychological distress, as well as physical and mental quality of life, in patients with lymphoid malignancies undergoing first-line chemotherapy, and to identify associated factors.

Methods: We conducted a descriptive cross-sectional study including 60 patients with lymphoid malignancies undergoing first-line chemotherapy and followed in the adult clinical hematology department of Aziza Othmana Hospital. We used the Hospital Anxiety and Depression Scale (HADS) to screen for anxiety and depression, and the 12-Item Short Form Health Survey (SF-12) to assess quality of life.

Results: According to the HADS, 27% of patients had anxiety and 25% had depression. Student status and psychiatric history were significantly associated with anxiety in both univariate and multivariate analysis. In univariate analysis, financial difficulties and somatic comorbidities were significantly associated with depression. In multivariate analysis, female gender and financial difficulties were predictors of depression.

According to the SF-12, 55% of patients had impaired physical health and 40% had impaired mental health. Somatic comorbidities were significantly associated with impairment of physical health in both univariate and multivariate analysis. In univariate analysis, impairment of mental health was significantly associated with female gender, psychiatric history, and somatic comorbidities. In multivariate analysis, female

gender, financial difficulties, and somatic comorbidities were predictors of impaired mental health. Anxiety and depression were significantly associated with impairment of both physical and mental health.

Conclusion: This study highlights the high prevalence of psychological distress in patients with lymphoid malignancies undergoing chemotherapy and the significant impairment of their quality of life. Early screening and management of psychological disorders, as well as improvement of patients' quality of life, are recommended to ensure optimal continuity of care.

P-49: LOCALIZED-STAGE HODGKIN LYMPHOMA IN ADULTS: PATIENT PROFILE AND THERAPEUTIC OUTCOMES OF MDH2015

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Introduction: Localized Hodgkin lymphoma (HL) is a highly curable hematologic malignancy, with combined chemotherapy and radiotherapy constituting the standard treatment. In Tunisia, the national MDH2015 protocol has been implemented since 2015; however, its outcomes have never been formally evaluated. This study aimed to describe the epidemiological and clinicobiological characteristics of patients with localized HL, as well as the therapeutic outcomes, toxicity profile, and prognostic factors associated with the MDH2015 protocol.

Methods: We conducted a retrospective descriptive study at the Adult Clinical Hematology Department of Aziza Othmana Hospital over an 11-year period. Patients aged 18 to 60 years with localized classical HL who were treated according to the MDH2015 protocol between January 2015 and December 2023 were included.

Results: Ninety-nine patients were included, of whom 98 received the planned treatment. The median age was 34 years, with a female predominance (male-to-female ratio: 0.8). Nodular sclerosis was the predominant histological subtype (77.6%), and 87.8% of patients had stage II disease. The favorable-risk group accounted for 15% of patients, whereas 85% were classified as intermediate-risk. The complete response rate was 100% in the favorable-risk group, while the overall response rate reached 96% in the intermediate-risk group. Eight patients experienced treatment failure, including three with primary refractory disease and five with late relapse. Salvage treatment mainly consisted of IGEV, ICE, or Brentuximab vedotin-based regimens, followed by autologous stem cell transplantation whenever feasible. Five-year overall survival (OS) was 98%, event-free survival (EFS) was 85% at 3 years and 75% at 5 years, and relapse-free survival (RFS) was 98% at 3 years and 96% at 5 years. Elevated erythrocyte sedimentation rate (ESR) and infradiaphragmatic involvement were the only independent prognostic factors associated with poorer EFS. Treatment-related toxicity was predominantly hematological, mainly neutropenia, with a low incidence of late complications.

Conclusion: The MDH2015 protocol provides excellent therapeutic outcomes in patients with localized Hodgkin lymphoma, with high survival rates and an acceptable toxicity profile.

P-50: COMPARATIVE EFFICACY OF RASBURICASE-BASED STRATEGIES AND ALLOPURINOL FOR TUMOR LYSIS SYNDROME RISK

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Introduction: Tumor lysis syndrome (TLS) is managed through two main strategies: allopurinol, which inhibits uric acid biosynthesis, and rasburicase (recombinant urate oxidase), which directly degrades circulating uric acid, enabling more rapid correction of hyperuricemia. This study compares the efficacy of rasburicase alone, rasburicase followed by allopurinol, and allopurinol alone in the prevention and treatment of TLS in adult patients with hematologic malignancies.

Methods: A retrospective descriptive study conducted over 6 months (November 2025 – April 2026) in the clinical hematology department of a Tunisian specialized hematology center. Data were collected from computerized medical records using the STKmed software. Variables included diagnosis, age, and biological parameters: serum uric acid levels before and after treatment, and the date of uricemia normalization. Statistical analysis was performed using Microsoft Excel.

Results: Thirty-five adult patients (age ≥ 18 years) were included: rasburicase group (n=7: alone n=3, followed by allopurinol n=4) and allopurinol-alone group (n=24). Hematologic malignancies included acute leukemias, chronic myeloid leukemias, and multiple myeloma. Baseline serum uric acid levels were markedly higher in the rasburicase group ($1121.66 \pm 833 \mu\text{mol/L}$, approximately 4 fold the upper limit of normal) compared to the allopurinol group ($404.91 \pm 116 \mu\text{mol/L}$, approximately 1.5-fold the upper limit of normal). Following treatment, the rasburicase group achieved a 43.2% reduction in serum uric acid within 5 hours, with a single injection being sufficient in the majority of cases, versus a 26.4% reduction within 48 hours in the allopurinol group, with a mean treatment duration of 11.4 days.

Conclusion: Rasburicase demonstrated superior efficacy and faster onset of action compared to allopurinol, despite a significantly higher baseline hyperuricemia. These findings support a clinically consistent approach: rasburicase as first-line therapy for severe hyperuricemia requiring urgent correction, and allopurinol as prophylaxis in low-to-moderate risk patients. Therapeutic decision-making should be guided by the degree of clinical urgency and the severity of hyperuricemia.

P-51: MANAGEMENT OF VASO-OCCLUSIVE CRISES IN SICKLE CELL DISEASE: A SINGLE-CENTER EXPERIENCE FROM NORTHWEST

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Introduction: Vaso-occlusive crisis (VOC) is the most common cause of hospitalization in patients with sickle cell disease (SCD) and may be associated with severe pain and potentially life-threatening complications. We aimed to describe the clinical and biological characteristics of VOCs and to assess their management and outcomes in a regional hospital in Northwestern Tunisia.

Methods: We conducted a descriptive, retrospective single-center study including adult patients with sickle cell disease who presenting at least one VOC between June and August 2025. Clinical characteristics, pain intensity, complications, analgesic treatment, antibiotic use, transfusion requirements, pain resolution time, and length of hospital stay were analyzed.

Results: Twenty patients were included. The mean delay between VOC onset to medical consultation was 2 days [0–6]. All patients reported severe pain (VAS $>8/10$), including 70% with a VAS score of 10/10. Fever occurred in 10 patients,

dyspnea in 4, cough in 2, and headache in 1 patient.

Before admission, 10 patients had received step I analgesics and 4 patients had received step II analgesics.

VOC was uncomplicated in half of the cases whereas five patients developed acute chest syndrome, four had urinary tract infection, and one had pneumococcal meningitis.

All patients required step III analgesics. Antibiotic therapy was administered to 12 patients, and red blood cell transfusion to 8. Mean time to pain relief was 4 days [3–14], and mean hospital stay was 5 days [3–12].

Conclusion: VOCs were associated with severe pain, delayed presentation, and a high burden of complications in this single-center experience. These findings highlight the need for early access to appropriate analgesia, standardized emergency management, and prompt recognition of complications to improve outcomes in patients with SCD.

HISTOLOGIE EMBRYOLOGIE

P-52: PRELIMINARY STUDY ON THE IN VITRO EFFECT OF SULODEXIDE ON SPERM MOTILITY IN INFERTILE MEN

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Introduction: While sulodexide is widely utilized for chronic vascular disease due to its anti-inflammatory and antioxidant properties, its application to semen in vitro has not been established. Pentoxifylline, a vasodilator, is previously used to identify moving sperm before Intracytoplasmic Sperm Injection. However, Pentoxifylline use was limited for teratogenicity potential risk and replaced by sulodexide in cardiovascular diseases. We hypothesized sulodexide might similarly improve sperm motility in vitro.

Methods: In this prospective paired study, semen samples from 30 infertile men were exposed in vitro to different concentrations of sulodexide over 30 minutes. Semen parameters were evaluated according to WHO method. Total and rapid progressive motility were compared before and after exposure to sulodexide using the Wilcoxon signed-rank test; associations with clinical variables used Spearman correlation.

Results: Total motility at 30 minutes did not differ significantly after sulodexide exposure (median 45.0% [40.0-50.0] before versus 45.0% [37.5-55.0] after exposure, $p=0.103$). In contrast, sulodexide significantly increased rapid progressive motility, from 10.0% [5.0-10.0] to 15.0% [5.7-15.0] ($p<0.001$). Longer infertility duration correlated with lower total motility ($r=-0.45$, $p=0.022$) and higher multiple anomaly index ($r=0.41$, $p=0.037$); age correlated inversely with seminal volume ($r=-0.40$, $p=0.037$).

Conclusion: Sulodexide selectively increased rapid progressive sperm motility without changing overall motile sperm count, suggesting a qualitative shift toward more efficient progressive motility rather than a general motility-enhancing effect. This pattern is consistent with a possible capacitation-like effect, warranting confirmation with direct capacitation markers.

INTELLIGENCE ARTIFICIELLE

P-53: KNOWLEDGE, ATTITUDES, AND PRACTICES OF TUNISIAN PHARMACISTS REGARDING MEDICAL DEVICES INTEGRATING IA

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Introduction: Artificial intelligence (AI) represents a major technological advancement in healthcare, with a significant impact on the medical device (MD) sector. Aim:

To assess the knowledge, attitudes, and practices of Tunisian pharmacists regarding AI-integrated medical devices (AI-MD).

Methods: This is a KAP (Knowledge, Attitudes, Practices) survey conducted over one month (January 2026) among Tunisian pharmacists via a Google Forms questionnaire. The questionnaire comprised three sections, each including at least 5 mandatory questions. Statistical analysis was performed using Excel software.

Results: A total of 56 pharmacists participated, with a sex ratio (M/F) of 0.40. Seventy-one point four percent (71.4%) practiced in university hospitals. The majority of participants were pharmacy residents (47%). Professional experience of 1 to 5 years was reported by 62.5% of participants (35/56). Regarding knowledge, 80.4% had never heard of AI-MD, and 89.3% considered their knowledge of regulatory requirements to be low. Interest in training was strongly marked: 94.6% of participants stated they were in favor of training on AI-MD, while none had previously received such training. In terms of practices, 75% of respondents considered that pharmacists play a key role in the evaluation and management of AI-MD.

Conclusion: The Results reveal a low level of knowledge among participating pharmacists regarding AI-MD, contrasting with a favorable attitude and strong motivation to pursue training. Additional, targeted training appears necessary to improve their competencies and involvement in the management of these innovative technologies.

P-54: CHATGPT VS. CLINICIANS: WHO BEST DETECTS PRESCRIPTION ERRORS IN INTENSIVE CARE UNIT?

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Introduction: Medication errors are frequent and potentially serious in intensive care units (ICU). Generative artificial intelligence (AI) could serve as a tool to help secure prescriptions. This study assessed ChatGPT's ability compared to clinicians in detecting ICU prescription errors.

Methods: This prospective comparative study analyzed anonymized prescriptions from ICU patients collected over a one-week period. Each prescription was independently evaluated by ChatGPT and a clinician team (pharmacist and intensivist). The analysis identified and compared different error categories (dosage, route, method of preparation, incomplete prescriptions (units, frequency), duplicate prescriptions, and drug interactions).

Results: The study evaluated 10 prescriptions for eight ICU patients corresponding to a total of 107 medication lines, with a mean of 11 lines per prescription. ChatGPT detected 22 errors involving 20 prescription lines (19%), whereas clinicians identified 49 errors involving 42 lines (39%). The detected errors are summarized in Table 1.

Results indicate that ChatGPT performed well in identifying

incomplete prescriptions (especially missing units). However, major disparities with clinicians were observed in situations that require clinical reasoning (particularly inappropriate high doses despite renal or hepatic impairment, as well as drug interactions). Two errors were not detected by the AI: therapeutic duplication (prescribing the same active ingredient) and an incorrect route of administration (specifying oral instead of nasogastric for an intubated patient). No severe error was identified by either evaluator.

Conclusion: ChatGPT's performance remains limited in situations requiring clinical expertise. Generative AI could be integrated into medication safety strategies as an "AI-clinician copilot" but cannot substitute the pharmacist and intensivist in prescription review.

P-55: THE RISE OF SELF-DIAGNOSIS THROUGH AI-MEDIATED SEARCH OVERVIEWS; STUDY OF ACCURACY, RISK AND IMPACT

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Introduction: The integration of generative artificial intelligence into search engines has transformed online health information-seeking by providing users with immediate, synthesized medical answers. While these tools improve accessibility, their increasing use for self-diagnosis raises concerns regarding accuracy, reliability, clinical safety and the potential replacement of professional medical advice.

Aim: To assess the accuracy and reliability of AI-generated medical information, identify the risks associated with AI-assisted self-diagnosis, and evaluate its impact on users' health-information-seeking behavior.

Methods: A review of recent scientific literature (2023–2026) was conducted, focusing on studies evaluating AI-generated health information, Google AI Overviews, large language models, diagnostic and triage performance, and user behavior. Particular attention was given to studies assessing AI-generated responses within search engines.

Results: Recent evidence demonstrates substantial variability in AI-generated health information. An audit of 1,508 pregnancy and baby-care queries found inconsistencies between AI Overviews and Featured Snippets in 33% of cases, while medical safeguards were present in only 11% of AI Overviews. Another audit of 900 health-related queries found AI Overviews in 87.7% of searches, with only 46.2% overlap between their cited sources and organic search Results, indicating a significant shift in the information presented to users. These findings highlight risks of misinformation and overreliance on AI responses.

Conclusion: AI-assisted self-diagnosis offers speed and accessibility but cannot replace clinical judgment. Improving AI Overviews requires transparent sourcing, medical safeguards and better health literacy, while preserving patient trust in healthcare professionals remains essential in motivating patients to seek qualified opinions.

P-56: GENERATIVE ARTIFICIAL INTELLIGENCE IN MEDICINE: ADOPTION, VERIFICATION, AND RESPONSIBLE USE

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Introduction: Generative artificial intelligence (AI) is rapidly entering medical practice, but adoption may outpace physicians' preparedness to verify content and use these tools responsibly. This study aimed to assess AI use, verification practices, exposure to erroneous content, confidentiality, scientific writing, and AI-related training among physicians.

Methods: An anonymous cross-sectional survey was conducted among physicians. It assessed AI use, independent verification, exposure to incorrect medical content or unverifiable references, entry of patient-derived information, scientific writing, and formal training. Factors associated with systematic verification were analyzed using multivariable logistic regression.

Results: Among 172 participants, 102 (59.3%) were residents, 20 (11.6%) specialist physicians, and 50 (29.1%) other medical grades. Overall, 139 (80.8%) had used generative AI professionally and 88 (51.2%) used it at least weekly. Use was more frequent among residents than among specialists and other grades (89.2% vs 65.0% and 70.0%; $p=0.003$). Among AI users, 62 (44.6%) systematically verified information using independent sources, 80 (57.6%) had encountered incorrect or misleading medical content, and 65 (46.8%) had encountered inaccurate or unverifiable references. AI-assisted scientific writing was reported by 103 users (74.1%), whereas only 18 participants (10.5%) had received formal training. Twenty-seven users (19.4%) reported entering patient-derived information into AI tools. Formal training was independently associated with systematic verification (adjusted odds ratio 3.18; 95% confidence interval 1.05–9.62; $p=0.041$).

Conclusion: Generative AI use was widespread, particularly among residents, but systematic verification and formal training remained insufficient. Structured AI literacy, verification standards, and institutional guidance are needed for safe and responsible use.

P-57: TRANSPARENCY, HUMAN CONTROL AND ACCOUNTABILITY IN CLINICAL AI ADOPTION

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Introduction: Clinical artificial intelligence (AI) raises ethical questions about privacy, explainability, autonomy, trust, and accountability.

This study aimed to describe medical students' ethical expectations regarding clinical AI, compare first-cycle (G1) and second-cycle (G2) students, and examine their association with intended AI use.

Methods: This single-center cross-sectional survey used convenience sampling and assessed privacy concerns, acceptance of AI influence on important decisions, trust, attribution of responsibility for AI-related errors, and expectations regarding disclosure, explainability, choice, and human override. G1 and G2 were compared using Mann-Whitney U or Fisher's exact tests. Associations with intended AI use were assessed using Spearman correlations. Accountability

was examined using Fisher's exact test and logistic regression adjusted for sex and study cycle. Two-sided p values <0.05 were considered significant.

Results: The study included 85 students (G1=70; G2=15). Privacy concerns were reported by 63.5%. AI influence on important medical decisions was accepted by 31.3% and rejected by 49.4%. Students expected disclosure (75.3%), explainability (75.3%), choice (77.8%), and human override (58.5%). These expectations correlated with intended AI use ($p=0.349-0.424$; all $p\leq 0.001$), whereas trust did not ($p=0.016$; $p=0.887$). Among 77 respondents, responsibility for AI-related errors was assigned to developers by 59.7%, physicians by 35.1%, and patients by 5.2%. Intended AI use was more frequent among students assigning responsibility to developers rather than physicians (84.8% vs 55.6%; $aOR=4.51$, 95% CI 1.46-13.95; $p=0.009$).

Conclusion: Students' intended AI use was associated with expectations of transparency and human control. The attribution of responsibility also differed according to intended use.

P-58: PERCEPTIONS AND USE OF ARTIFICIAL INTELLIGENCE AMONG MEDICAL RESIDENTS IN SCIENTIFIC RESEARCH

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Introduction: AI tools are increasingly used in academic writing, yet little is known about how medical residents use them or perceive their impact on scientific integrity.

Methods: A cross-sectional descriptive survey used an anonymous, self-administered online questionnaire (Google Forms). Inclusion criterion: being a medical resident. Twenty-four responses were collected.

Results: twenty four responses were collected. All the residents (100%) used AI tools, mostly often (52.2%) or very often (17.4%). AI was mainly used for abstracts (82.6%), posters (73.9%) and oral presentations (52.2%), chiefly for information search (87.0%), reformulation (69.6%) and writing (65.2%). Most verified AI-generated information often (52.2%) or always (21.7%), and references always (43.5%) or often (39.1%). Incorrect information and nonexistent references were rated as few by 73.9% and 52.2%. All residents believed AI improved their work quality, but 39.1% felt it moderately compromised scientific integrity. The most problematic practices cited were unverified references (78.3%) and unverified text (73.9%). Most (69.6%) supported declaring AI use in scientific work, but only 26.1% considered AI a valid co-author, and views on mandatory disclosure at submission were nearly split (47.8% in favor). Overall perception of AI's impact on research was positive (78.3% rather positive, 21.7% very positive).

Conclusion: AI use is nearly universal among medical residents, mainly for writing and literature tasks. Despite an overall positive perception, residents remain cautious, favoring verification and disclosure while largely rejecting AI co-authorship.

MALADIES INFECTIEUSES

P-59: KNOWLEDGE AND PRACTICES OF GENERAL PRACTITIONERS IN THE MANAGEMENT OF COMMUNITY-ACQUIRED PNEUMONIA

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Introduction: Community-acquired pneumonia (CAP) remains one of the most frequent infectious diseases managed in primary care. Early recognition, appropriate diagnostic workup, and rational antibiotic use are essential to reduce morbidity and prevent antimicrobial resistance. General practitioners (GPs) play a central role in CAP management. This study aimed to assess GPs' knowledge and practices concerning the diagnosis, risk assessment, and therapeutic management of CAP.

Methods: A cross-sectional online survey was conducted between September 2024 and September 2025 among general practitioners. Participation was voluntary and anonymous. The questionnaire included items on demographic characteristics, diagnostic strategy, use of severity scores, and adherence to treatment guidelines.

Results: A total of 189 responses were analyzed. The mean age of participants was 44 ± 9 years, and 58.2% (n=110) had fewer than 10 years of practice experience. Most respondents (91%, n=172) correctly identified the cardinal clinical signs of CAP, and 88.9% (n=168) requested chest radiography as part of the diagnostic approach. However, only 32.8% (n=62) systematically used a validated severity score (CURB-65 or PSI), and 27% (n=51) reported hospital referral based on clinical impression alone. Sputum culture and blood tests were requested by 45.5% (n=86) and 39.7% (n=75) of respondents, respectively. Regarding empirical antibiotic therapy, amoxicillin was appropriately selected for typical CAP by 63.5% (n=120), while fluoroquinolones or third-generation cephalosporins were used in 28.6% (n=54). In suspected atypical pneumonia, macrolides were prescribed by 59.8% (n=113), and doxycycline by 21.7% (n=41). The recommended duration of 5–7 days was correctly applied by 41.8% (n=79), while 32.3% (n=61) prescribed treatment for ≥ 10 days. Only 46.6% (n=88) reported following national or international CAP guidelines. GPs who had participated in continuing medical education within the previous two years (n=82, 43.4%) achieved significantly higher mean composite knowledge scores (78.2 ± 11.4 vs. 64.5 ± 13.8 , $p=0.002$) and greater adherence to guidelines (72% vs. 56.3%, $p=0.01$).

Conclusion: This study revealed several knowledge gaps among community GPs in the management of CAP. Structured educational programs, reinforced guideline dissemination, and digital decision-support systems are essential to enhance the quality and consistency of CAP management in primary care.

P-60: PRIMARY CARE PHYSICIANS' KNOWLEDGE AND PRACTICES REGARDING INFLUENZA VACCINATION

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Introduction: Seasonal influenza is a major cause of morbidity and mortality, particularly among older adults and individuals at high risk. Annual vaccination remains the most effective preventive measure; however, vaccination coverage remains suboptimal. Primary care physicians play a pivotal role in promoting and prescribing influenza vaccination. This study aimed to assess primary care physicians' knowledge and practices regarding influenza vaccination and to identify

perceived barriers to its implementation.

Methods: A descriptive cross-sectional observational study was conducted between March and September 2025 among primary care physicians working in private practice. An anonymous, voluntary, self-administered questionnaire assessed knowledge of influenza vaccination recommendations, self-reported prescribing and follow-up practices, and barriers encountered in routine clinical practice. Data were analyzed descriptively and expressed as frequencies and percentages.

Results: A total of 162 primary care physicians were included. Adequate knowledge of influenza vaccination recommendations was reported by 152 respondents (93.8%). The main vaccination indications correctly identified were age ≥ 65 years (146; 90.1%), chronic diseases (cardiovascular disease, chronic respiratory disease, diabetes mellitus, and chronic kidney disease) (141; 87.0%), immunosuppression (134; 82.7%), and pregnancy (119; 73.5%). Regarding clinical practice, 148 physicians (91.4%) systematically recommended influenza vaccination to older adults and high-risk individuals, 10 (6.2%) did so occasionally, and 4 (2.4%) rarely. Vaccination status was systematically reviewed during follow-up consultations by 84 physicians (51.9%) and occasionally by 34 (21.0%). Influenza vaccination was administered in the physician's office by 97 respondents (59.9%), whereas 65 (40.1%) mainly referred patients to healthcare facilities or community pharmacies. Vaccination tracking tools, including vaccination records and electronic medical records, were used by 104 physicians (64.2%), with electronic medical records used by 62 (59.6%) and vaccination records by 48 (46.1%). The main barriers identified were patient vaccine hesitancy (106/162; 65.4%), lack of consultation time (67/162; 41.4%), perceived poor acceptance of seasonal vaccination (59/162; 36.4%), and patient forgetfulness (42/162; 25.9%). Finally, 112 physicians (69.1%) expressed interest in receiving specific training on influenza vaccine.

Conclusion: Primary care physicians demonstrated a high level of knowledge regarding influenza vaccination, with broad integration into routine clinical practice. Nevertheless, persistent patient-related and organizational barriers continue to limit optimal vaccination coverage. Targeted educational interventions and simplified vaccination recommendations may help strengthen influenza prevention in primary care.

P-61: CLINICAL FEATURES, MYCOLOGICAL PROFILE, AND THERAPEUTIC MANAGEMENT OF HOSPITAL-ACQUIRED CANDIDURIA

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Introduction: Candiduria is frequently observed in patients with predisposing factors for urinary Candida colonization. Distinguishing urinary tract infection from colonization remains challenging and may lead to unnecessary antifungal use.

Methods: We conducted a retrospective descriptive study of patients with candiduria admitted to the Department of Infectious Diseases between January 2009 and December 2025. Epidemiological, clinical, microbiological, therapeutic, and outcome data were retrospectively collected from medical records and analyzed.

Results: Thirty-one patients were included (mean age, 59.9 ± 15.8 years; sex-ratio, 1.21). Diabetes mellitus was the

main comorbidity (n=24; 77.4%). Predisposing factors included urinary catheterization or neurogenic bladder (n=8; 25.8%), intensive care unit admission (n=6; 19.4%), prior broad-spectrum antibiotic exposure (n=6; 19.4%), and central venous catheterization (n=5; 16.1%). Urinary symptoms were present in 20 patients (64.5%), with fever in 3 (9.7%). *Candida albicans* was the most frequently isolated species (n=13; 41.9%), followed by *C. glabrata* (n=8; 25.8%) and *C. tropicalis* (n=5; 16.1%). Antifungal therapy was initiated in 30 patients (96.8%), predominantly systemic fluconazole; 3 patients (9.7%) received intravesical therapy. Mean treatment duration was 13.2 days. Outcomes were favorable in 23 patients (74.2%), unfavorable in 7 (22.6%), and 1 patient was lost to follow-up.

Conclusion: Candiduria predominantly affected diabetic patients with urinary or healthcare-related predisposing factors. The high rate of antifungal treatment emphasizes the need to distinguish colonization from infection and promote rational antifungal use.

MÉDECINE D'URGENCE

P-62: STANDARDIZING DEBRIEFING PRACTICES IN MEDICAL SIMULATION: EDUCATIONAL IMPACT OF THE DASH© EVALUATION

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Introduction: Simulation-based medical education has become a key component in developing clinical competence, where structured debriefing ensures reflective learning. The Debriefing Assessment for Simulation in Healthcare (DASH©) was developed to improve the quality and consistency of debriefings. This study aimed to evaluate the educational benefits of implementing the DASH© framework on learner satisfaction, feedback quality, and performance progression.

Methods: A prospective mixed-method study was conducted at the Simulation Center of the Faculty of Medicine of Tunis between March and October 2024. Ten instructors and eighty medical students participated in simulation sessions on emergency and communication scenarios. Each debriefing was scored across six DASH© dimensions (1–7 scale). Student satisfaction and perceived learning were evaluated using Likert questionnaires.

Results: After three months of applying the DASH© framework, the mean global debriefing score increased from 4.1 ± 0.7 to 6.3 ± 0.6 ($p < 0.001$). The most significant improvements were observed in structure and flow of discussion ($\Delta +2.4$) and clarity of learning objectives ($\Delta +2.1$). Learner satisfaction rose from 78% to 96%, with 91% of participants reporting that debriefings “helped clarify mistakes constructively.” Post-session test scores improved by 22% compared to baseline. Instructors reported better time management and greater comfort in handling emotional reactions during debriefings.

Conclusion: Implementing the DASH© guide significantly enhanced both the pedagogical quality and the emotional safety of simulation debriefings. By promoting structured feedback and reflective dialogue, this framework standardizes debriefing practices and optimizes educational impact across diverse clinical learning settings.

P-63: METABOLIC DISORDERS AMONG ELDERLY PATIENTS PRESENTING TO THE EMERGENCY DEPARTMENT

DURING SUMMER HEAT

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Introduction: Escalating emergency visits among geriatric populations highlight the rising burden of multi-morbidity, further exacerbated by summer thermal stress driven by climate change.

Aim: To delineate clinical presentations, epidemiological profiles, and metabolic disruptions in elderly patients admitted to emergency intensive care during July.

Methods: A prospective, observational, single-center study at Habib Bourguiba University Hospital (Sfax, July 2023) evaluated all patients aged ≥ 65 admitted to the resuscitation unit.

Results: Among 360 resuscitation admissions, 90 met inclusion criteria (mean age 77.4 ± 8.2 years; F/M ratio 1.04). Multimorbidity was highly prevalent (93%), dominated by hypertension (57.8%), diabetes (42.2%), cardiac arrhythmias (16.7%), COPD (14.4%), and chronic kidney disease (14.4%). Baseline functional autonomy was preserved in only 27.8%, while 38.9% had reduced mobility and 33.3% were bedridden. Blood gas analysis revealed metabolic acidosis in 36.6% and respiratory acidosis in 13.3%. Predominant electrolyte imbalances were hypocalcemia (23.3%), hypernatremia (18.9%), hypokalemia (17.8%), and hyponatremia (12.2%). Impaired renal function (CrCl < 60 mL/min) was present in 71.3% of tested patients.

Bedridden status strongly predicted adverse outcomes ($p = 0.01$). Admission hemodynamic instability, low Glasgow Coma Scale score ($p < 0.001$), dyskalemia ($p = 0.005$), elevated blood urea nitrogen ($p = 0.05$), creatinine ($p = 0.02$), and acidemia ($p = 0.02$) independently portended poor prognosis.

Conclusion: Geriatric electrolyte dysregulation during thermal extremes stems from interconnected frailty, renal dysfunction, and environmental heat. Targeted oral rehydration protocols and seasonal medication adjustments are paramount to mitigate heatwave-related morbidity.

P-64: OUT-OF-HOSPITAL CARDIAC ARREST: RESUSCITATION OUTCOMES AND GAPS IN THE CHAIN OF SURVIVAL

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Introduction: Out-of-hospital cardiac arrest (OHCA) remains a major public-health emergency, with survival dependent on timely recognition, cardiopulmonary resuscitation (CPR), defibrillation, and coordinated prehospital care. Tunisian data remain limited. This study describes the epidemiology, prehospital management, return of spontaneous circulation (ROSC), and factors associated with ROSC in OHCA managed by a mobile emergency medical service.

Methods: A retrospective descriptive and analytical study was conducted among patients managed for OHCA by the SMUR Mahres team, Sfax, during 2025. Demographic data, arrest circumstances, presumed etiology, initial rhythm, response

times, resuscitation procedures, and outcomes were extracted from intervention records. Patients with and without ROSC were compared.

Results: Twenty-two patients were included (mean age, 57 years; male-to-female ratio, 3.4). Cardiac arrest occurred in healthcare facilities in 54.5% and at home in 36.4%. Cardiac comorbidity was present in 50.0%; presumed causes were cardiac in 54.5% and respiratory in 31.8%. Mean call-to-arrival time was 22.9 ± 15.7 minutes. Initial rhythm was shockable in 13.6%. CPR was performed in 68.2%, defibrillation in 13.6%, endotracheal intubation in 18.2%, and bag-valve-mask ventilation in 45.5%. ROSC was achieved in 40.9% ($n=9$) after 27.2 ± 16.4 minutes. Age, response time, initial shockable rhythm, and presumed cardiac cause were not significantly associated with ROSC.

Conclusion: Despite ROSC in two-fifths of patients, prolonged response times, few shockable rhythms, and limited use of defibrillation and advanced airway management reveal important gaps in the chain of survival. Strengthening bystander CPR training, early defibrillation access, and prehospital response capacity should be regional priorities.

P-65: DIABETES MELLITUS IDENTIFIES A HIGH-RISK ISCHEMIC PROFILE IN EMERGENCY DEPARTMENT CHEST PAIN PATIENT

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Introduction: Risk stratification of acute chest pain in the emergency department (ED) remains challenging, and the impact of diabetes mellitus on objective ischemic burden in unselected ED populations is poorly characterized.

Aim: To evaluate whether diabetes mellitus is associated with a high-risk ischemic profile among adults presenting with acute chest pain.

Methods: In this prospective, single-center study over 6 months, we enrolled consecutive adults presenting with non-traumatic acute chest pain, excluding those with psychiatric or neurological conditions impairing assessment and those with persistent ST-elevation myocardial infarction (STEMI). Patients were stratified by diabetes status, and clinical characteristics, ECG findings, troponin levels, HEART/EDACS scores, revascularization, and in-hospital outcomes were compared.

Results: Among 521 patients (mean age 52.4 ± 15.5 years; 62.2% male), 172 (33.0%) had diabetes. Diabetic patients showed markedly higher rates of objective ischemia, including abnormal ECG (65.7% vs 38.1%), NSTEMI patterns (19.8% vs 6.9%), and troponin elevation $>3\times$ the upper reference limit (15.1% vs 4.9%; all $p<0.001$). HEART and EDACS scores were significantly higher, and diabetic patients underwent revascularization and were diagnosed with confirmed myocardial infarction more often (25.0% vs 6.0%), with more frequent cardiogenic shock (3.5% vs 0.9%, $p=0.030$).

Conclusion: Diabetes mellitus was consistently linked to greater ischemic burden and worse outcomes, supporting more intensified early risk assessment in this population.

P-66: BIOCHEMICAL PROFILES AND ORGAN DYSFUNCTION IN HEAT STROKE: A PROSPECTIVE EMERGENCY STUDY

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Introduction: Heat stroke is a medical emergency characterized by thermoregulatory failure, leading to multiple pathophysiological and biological alterations.

Aim: To describe the biological profiles observed in patients admitted for heat stroke.

Methods: A descriptive prospective cross-sectional study was conducted in the emergency department of Habib Bourguiba Hospital over a three-month period (Jun–August 2025).

Results: The study included 28 patients, with a mean age of 67.6 ± 16.0 years and a male predominance (M/F ratio = 1.8). Hydro-electrolytic and metabolic abnormalities included hyperosmolarity (53.6%, mean 309.5 ± 26.9 mmol/L), hypocalcemia (60%, mean 2.24 ± 0.21 mmol/L), hypokalemia (42.9%), and hypernatremia (39.2%, mean 143.6 ± 11.2 mmol/L). Acute kidney injury occurred in 50% of patients (creatinine 256.7 ± 202.0 μ mol/L), associated with elevated blood urea (57.1%, 16.8 ± 10.9 mmol/L) and rhabdomyolysis (25%, CPK 1155.5 ± 664.4 IU/L).

Cardiac troponin elevation was detected in 85.7% of cases (173.9 ± 493.4 ng/dL), and metabolic acidosis in 46.4% of patients (compensated in 71.4%; $\text{HCO}_3^- = 18.3 \pm 6.3$ mmol/L, $\text{BE} = -7.0 \pm 8.1$ mmol/L). Hematological analysis revealed thrombocytopenia in 21.4% of cases.

Conclusion: Heat stroke causes severe homeostatic collapse marked by renal, cardiac, metabolic, and hematological impairments. Early recognition of these biological disorders is essential to guide intensive care management.

P-67: PENETRATING STAB WOUNDS: EPIDEMIOLOGY AND FACTORS ASSOCIATED WITH SURGICAL EMERGENCIES

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Introduction: Penetrating stab wounds represent a growing public health problem, particularly in emergency departments. The main challenge in their management lies in the rapid assessment of severity and referral to an appropriate therapeutic strategy, whether surgical or conservative.

Objective: To study the epidemiological profile of penetrating stab wounds and identify factors associated with emergency surgery.

Methods: This was a retrospective descriptive and analytical study conducted in the emergency department, including patients admitted for penetrating stab wounds between January 1, 2021, and December 31, 2023. Epidemiological data were compared between groups with and without emergency surgery.

Results: We collected data on 70 patients with penetrating stab wounds. The population was young (median age 31 years) and predominantly male ($n=65$; 92.9%). These injuries were resulted in life-threatening conditions in 40% of patients. Thoracic (30.1%) and abdominopelvic (23%) injuries were predominant. Urgent surgery was required in 41.4% of patients, primarily orthopedic ($n=16$; 55%), vascular ($n=12$; 41.38%), and visceral ($n=10$; 34.5%). Hemodynamic instability ($p<0.001$), elevated shock index ($p=0.005$), multiple wounds ($p=0.04$), and abdominal ($p=0.013$) and peripheral ($p=0.011$) wound locations were significantly associated with the need for emergency

surgery.

Conclusion: A decision-making protocol integrating clinical and paraclinical data is crucial for better guiding patients between conservative treatment and emergency surgery

P-68: MODIFIED HEART SCORE VERSUS EDACS, TIMI, AND GRACE FOR RISK STRATIFICATION OF CHEST PAIN IN THE ED

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Introduction: The EDACS, TIMI, and GRACE scores are used to assess the risk of acute coronary syndrome (ACS), but their comparative performance remains unknown. This study aims to compare the diagnostic accuracy of these scores in predicting ACS.

Methods: A prospective study including 521 patients admitted for acute chest pain. EDACS, TIMI, and GRACE scores were calculated at admission. Performance criteria included sensitivity, specificity, area under the curve (AUC), and positive predictive value (PPV). The scores' performances were compared by ROC curves.

Results: The mean age of patients was 52.39 ± 15.5 years, with 62% men. The EDACS score showed the best AUC (0.9) with sensitivity of 95.8% and specificity of 71%. The TIMI score had an AUC of 0.882, a high specificity (99.2%) but low sensitivity (31.9%). The GRACE score had an AUC of 0.845, a specificity of 98.3% and sensitivity of 30.1%. Among the 521 patients, 355 were at low risk and 166 at high risk.

Conclusion: The EDACS score showed the best performance for initial screening of ACS. The TIMI score was better for confirming low-risk diagnoses, and GRACE was useful for overall risk assessment. These Results suggest preferential use of EDACS for initial diagnosis.

P-69: IMPACT OF DIABETES STATUS ON THE PROGNOSTIC VALUE OF RISK SCORE CATEGORIES IN CHEST PAIN

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Introduction: Risk scores are widely used for emergency department (ED) chest pain stratification. However, whether categorical risk performance remains consistent across diabetic and non-diabetic patients is insufficiently explored. aim: To evaluate the prognostic performance of HEART, TIMI, GRACE and EDACS score categories for predicting major adverse cardiac events (MACE) and in-hospital mortality according to diabetes status.

Methods: Patients presenting with chest pain were stratified by diabetes status. Associations between score categories (low, intermediate, high risk) and outcomes were analyzed using chi-square testing (Pearson; Fisher when appropriate).

Results: For HEART score, MACE incidence increased markedly across categories in both diabetics (0%, 15.9%, 81.0%) and non-diabetics (0%, 24.7%, 66.7%) ($p < 0.001$ in both groups). Mortality was concentrated in the high-risk category (10.3% diabetics; 6.7% non-diabetics; $p \leq 0.003$).

Similarly, TIMI high-risk category showed strong discrimination for MACE (83.3% diabetics; 78.6% non-diabetics; $p < 0.001$) and increasing mortality gradient (11.9% and 7.1%, respectively; $p < 0.01$).

GRACE high-risk category demonstrated the strongest association with both MACE (88.2% diabetics; 72.7% non-diabetics; $p < 0.001$) and death (17.6% and 13.6%; $p < 0.001$).

EDACS high-risk classification predicted MACE in both groups ($p < 0.001$) but showed weaker association with mortality in diabetic patients ($p = 0.304$).

Conclusion: Categorical risk stratification remains robust across diabetes subgroups. GRACE and HEART show strong prognostic consistency for both MACE and mortality, whereas EDACS appears primarily MACE-oriented. Diabetes does not attenuate score performance but identifies a higher absolute-risk phenotype, reinforcing tailored ED risk-based strategies.

MÉDECINE DENTAIRE

P-70: KNOWLEDGE, ATTITUDES AND PRACTICES TOWARD INFECTION PREVENTION AMONG TUNISIAN DENTAL ASSISTANTS

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Introduction: Dental procedures expose healthcare personnel and patients to blood, saliva, and aerosols, increasing the risk of cross-infection. As key members of the dental team, dental assistants play a critical role in infection prevention through instrument reprocessing, environmental decontamination, and adherence to standard precautions. However, data on their infection prevention practices remain scarce in Tunisia.

Aim: To assess the knowledge, attitudes, and practices (KAP) regarding infection prevention among Tunisian dental assistants and to identify factors associated with good infection control practices.

Methods: A national cross-sectional survey was conducted between January and March 2026 among 253 dental assistants working in private, public, and university dental settings across Tunisia. Data were collected using a validated self-administered online questionnaire. Descriptive statistics and multivariable logistic regression were performed to identify independent predictors of good infection control practices.

Results: Participants demonstrated high knowledge (mean score: $6.13 \pm 0.94/7$), and 92.5% reported positive attitudes toward infection prevention. However, only 54.5% achieved good infection control practices. Only 11.5% had received recent infection-control training, and hepatitis B vaccination coverage was 35.2%. Knowledge gaps persisted regarding sterilization cycle duration (68.4%), biological monitoring (75.9%), and post-exposure management following blood exposure accidents (82.2%). Independent predictors of good practices were higher knowledge scores ($aOR = 1.60$; 95%CI: 1.15–2.22), nursing-level education ($aOR = 2.65$; 95%CI: 1.03–6.84), and

consistent availability of infection-control materials (aOR=0.46; 95%CI:0.21–0.98).

Conclusion: Despite satisfactory knowledge and highly positive attitudes, infection prevention practices among Tunisian dental assistants remain suboptimal. Strengthening continuing professional education and ensuring adequate organizational resources are essential to improve compliance with evidence-based infection control measures and enhance patient and occupational safety.

P-71: HORIZONTAL HEAD ROTATION ALTERS MANDIBULAR POSITION: A CROSS-SECTIONAL STUDY

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Introduction: Head and neck posture can influence mandibular position and may affect clinical procedures requiring accurate assessment of mandibular relationships. However, the effect of horizontal head rotation on mandibular deflection remains insufficiently documented.

Aim: To quantify mandibular deflection induced by horizontal head rotation and assess whether gender, muscle typology, or previous orthodontic treatment influences this displacement.

Methods: A cross-sectional analytical study was conducted among 40 healthy dental students. Mandibular movements were recorded in a dental chair using a custom-made axiograph connected to a facebow and mandibular bite fork. Incisal point displacement was measured at baseline (0°) and during bilateral horizontal head rotations of 10°, 20°, 30°, and 60°. Data were analyzed using Student's t-test and analysis of variance, with $p \leq 0.05$ considered statistically significant.

Results: Horizontal head rotation produced a forward and contralateral displacement of the incisal point. No measurable deviation was observed at 10°, whereas minimal displacement was detected at 20° (maximum: 0.2 mm). Mandibular deflection increased significantly at 30° (0.40 ± 0.23 mm to the right and 0.43 ± 0.21 mm to the left) and reached its maximum at 60° (0.83 ± 0.37 mm and 0.85 ± 0.36 mm, respectively; $p < 0.01$). No significant differences were observed according to gender, muscle typology, or previous orthodontic treatment ($p > 0.05$).

Conclusion: Horizontal head rotation beyond 20° may induce clinically relevant mandibular displacement, with greater deflection at 30° and 60°. Maintaining appropriate head alignment during occlusal registration and restorative procedures may improve the accuracy of mandibular assessment.

P-72: DETERMINANTS OF PROFESSIONAL MOTIVATION AMONG TUNISIAN DENTISTS: A CROSS-SECTIONAL STUDY

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Introduction: Professional motivation is a determinant of dentists' engagement, satisfaction, and quality of practice. However, occupational, financial, and organizational challenges may negatively affect motivation and well-being. Self-Determination Theory conceptualizes motivation along a continuum from amotivation to intrinsic motivation, according to autonomy. In Tunisia, workforce changes and evolving practice conditions have created new challenges, while evidence regarding dentists' motivation remains limited. Identifying associated factors is essential to promote sustainable dental practice.

Aim: To assess professional motivation among Tunisian dentists and identify its sociodemographic, professional, and practice-related determinants.

Methods: A cross-sectional study was conducted between March and September 2025 among dental graduates practicing in public, private, or mixed sectors. Data were collected using a 37-item questionnaire adapted from the WEIMS and grounded in Self-Determination Theory. Following a pilot pretest, the questionnaire was distributed online and in paper format.

Results: The study included 388 dentists, predominantly women (67.5%), with a mean age of 37 years. Experience distribution was: 32.7% had <5 years, 26.8% 5–10 years, 30.2% 11–20 years, and 10.3% >20 years. Solo practice predominated (55.9%), followed by public facilities (36.6%). Training was frequent (54.4% several times annually). The mean W-SDI score was 2.34 ± 7.05 (range, –19.33 to +20.33), reflecting heterogeneous profiles with a slight tendency toward autonomous regulation. Age correlated positively with W-SDI ($r=0.123$; $p=0.015$), while higher scores were observed among specialists, mixed/private-sector, and urban practitioners ($p<0.05$).

Conclusion: Tunisian dentists demonstrated heterogeneous, moderately self-determined motivation, associated with specialization and urban practice, but challenged by extrinsic constraints, highlighting the need for reforms.

P-73: TITLE: THE CONTRIBUTION OF SALIVARY LIQUID BIOPSY TO THE EARLY DIAGNOSIS OF ORAL CAVITY CANCER

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Introduction: Oral cavity cancer, predominantly oral squamous cell carcinoma (OSCC), is often diagnosed at an advanced stage due to the absence of early symptoms, reducing 5-year survival. Although oral visual examination is accessible, its sensitivity is limited. Salivary liquid biopsy, being non-invasive and repeatable, has emerged as a promising approach for early detection and monitoring.

Aim: To evaluate, through a systematic review, the diagnostic performance of salivary biomarkers for oral cavity cancer and assess the clinical potential of salivary liquid biopsy.

Methods: This systematic review followed the PICOS framework and PRISMA guidelines. MEDLINE (via PubMed) and Scopus

were searched using (Oral Cancer) AND (Liquid Biopsy) AND (Saliva) for studies published from 2015 to 2025. Risk of bias was assessed using Joanna Briggs Institute (JBI) critical appraisal tools.

Results: Of 256 identified articles, 24 studies were included (9 cross-sectional, 5 cohort, 3 clinical, 3 review, 2 experimental, and 1 retrospective). Salivary biomarkers, including ctDNA, miRNAs, DNA methylation, HPV DNA, cytokines, and exosomes, demonstrated promising diagnostic performance. TP53 mutations showed 92% accuracy, while HPV DNA achieved 91.7% sensitivity and 100% specificity. Biomarkers also showed potential for predicting recurrence, with detection up to 630 days before clinical signs.

Conclusion: Salivary liquid biopsy is a promising complementary, and potentially alternative, tool for early detection, monitoring, and recurrence identification. However, large multicenter studies are needed to standardize protocols and establish universal diagnostic thresholds.

P-74: EFFECT OF DENTAL FLUOROSIS ON SHEAR BOND STRENGTH: A SYSTEMATIC REVIEW

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Introduction: Dental fluorosis (DF) alters the structure of enamel and dentin, which presents challenges for adhesive dentistry. These changes can negatively impact the bonding quality of restorative materials. It is a systematic review that aimed to evaluate micro-shear bond strength of restorative materials to fluorosed teeth compared to non-fluorosed teeth in order to provide clinical guidelines.

Methods: An electronic database search was conducted, including PubMed, Scopus, Cochrane, and Web of Science, from 2000 to 2024. Studies meeting the eligibility criteria were included. The methodological quality of the included studies was assessed using the Cochrane tool.

Results: A total of 10 in vitro studies were included, primarily focusing on the enamel-resin interface. The Results showed that fluorosed teeth had lower micro shear bond strength compared to non-fluorosed teeth. Factors such as the severity of fluorosis, adhesive composition, and surface treatments influenced bond strength. Etch-and-rinse systems were more effective than self-etch systems, particularly for moderate to severe fluorosis. Strategies like extended etching, using adhesives with 10-MDP, and sodium hypochlorite deproteinization improved adhesion to fluorosed enamel. However, bonding remains difficult in severe fluorosis due to the altered enamel structure, which resists acid etching.

Conclusion: Dental fluorosis adversely affects adhesive performance, necessitating tailored approaches to optimize bonding. These findings provide a foundation for clinical recommendations aimed at enhancing the success of restorative procedures on fluorosed teeth.

P-75: LEARNING CLINICAL REASONING: A SATISFACTION SURVEY AMONG DENTAL MEDICINE INTERNS

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Introduction: Clinical reasoning is the foundation of medical practice. From the very first contact with the patient, the practitioner generates diagnostic hypotheses that guide both

the interview and the physical examination. After collecting clinical and paraclinical data, these hypotheses are either confirmed or ruled out. Learning through clinical reasoning was introduced in the dental medicine department of Habib Thameur Hospital in Tunis to discuss cases not encountered during clinical training. The aim of this study was to evaluate the level of satisfaction of dental interns with learning through clinical reasoning (CRL).

Methods: A descriptive cross-sectional study was conducted among dental interns at Habib Thameur Hospital during 4 months. All interns assigned to the department during this period were included in this study. A document presenting the different clinical forms of dental trauma from both diagnostic and therapeutic perspectives was provided to the interns. A pre-test was used to assess interns' knowledge before the CRL sessions. The pre-test was online on the Kahoot website. Two CRL sessions focusing on dental trauma were scheduled. The scripting of the CRL sessions has been validated by the teaching committee of the Faculty of Dental Medicine of Monastir. Intern satisfaction was evaluated using a Likert scale via the mentimeter application.

Results: Thirteen interns were included in the study. The evaluation of the Introduction of CRL as an active teaching method was positive (80%). Interns agreed on the clarity of the clinical cases (75%). Diagnostic and therapeutic approaches were clear for the majority of interns. The CRL sessions were considered beneficial (80%), and interns were motivated to participate in further CRL sessions (85%).

Conclusion: Dental interns consider learning through clinical reasoning to be both positive and beneficial.

P-76: SURVEY AMONG TUNISIAN DENTISTS ON KNOWLEDGE AND ATTITUDES IN ORAL MUCOSAL PATHOLOGY: A CROSS SECTION

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Introduction: Oral mucosal pathologies range from benign lesions to oral cancers and are common in the population. Early detection is crucial, and dentists play a key role. This study aimed to assess Tunisian dentists' knowledge and attitudes regarding oral mucosal lesions, including elementary lesions, common benign lesions, potentially malignant disorders, and oral cancer.

Methods: A descriptive cross-sectional study was conducted between November 2024 and February 2025 using an online questionnaire of 64 items. Knowledge and attitude scores were calculated and analyzed using SPSS v25 with Chi-square tests and Pearson correlation.

Results: A total of 309 dentists participated, predominantly females, with 85% aged 25–35 years. Practice setting was significantly associated with knowledge ($p = 7.58 \times 10^{-18}$) and attitude scores ($p = 0.005$). Overall, 68% of participants achieved a "Good" knowledge score, though gaps remained regarding potentially malignant lesions and oral cancer. Attitude levels were satisfactory, with 67% scoring "Good" and 15% "Excellent."

Conclusion: While knowledge and attitudes were generally satisfactory, deficiencies in recognizing early signs of oral cancer indicate the need to enhance both undergraduate and continuing education. Strengthening postgraduate training, standardizing oral mucosa examinations, raising awareness of risk factors, and reinforcing the dentist's role in early detection are recommended.

P-77: PROFESSIONAL CONFIDENTIALITY IN DENTISTRY: A KAP STUDY AMONG TUNISIAN DENTISTS

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Introduction: Professional confidentiality is a cornerstone of ethical dental practice and patient trust. However, awareness of its general principles does not necessarily translate into accurate legal knowledge or consistent clinical practice. This study assessed the knowledge, attitudes, and practices of Tunisian dentists regarding professional confidentiality and explored the gap between ethical awareness and its practical implementation

Methods: A descriptive cross-sectional Knowledge, Attitudes, and Practices (KAP) study was conducted among practicing dentists in Tunisia between December 2025 and February 2026. An anonymous self-administered online questionnaire was distributed through professional networks. The questionnaire assessed sociodemographic characteristics and dentists' knowledge, attitudes, and practices regarding professional confidentiality. Descriptive statistics were used to summarize the findings.

Results: A total of 115 valid questionnaires were analyzed. All participants recognized professional confidentiality as a legal obligation, and 93.0% correctly considered that it extended to all patient-related information. However, only 27.0% correctly identified the three forms of liability associated with confidentiality breaches—disciplinary, criminal, and civil—and 35.7% did not know the exact criminal sanctions provided under Article 254 of the Tunisian Penal Code. Knowledge of the legal conditions allowing disclosure was also fragmented, with only 57.4% correctly identifying all three principal legal exceptions. Attitudes were generally consistent with ethical standards; however, important deficiencies were observed in practice. Only 13.0% systematically informed patients about their confidentiality rights, 18.3% documented sensitive requests or refusals in writing, 27.0% systematically ensured traceability of sensitive exchanges, and only 7.8% had ever completed a mandatory notification procedure.

Conclusion: Tunisian dentists demonstrate strong awareness of professional confidentiality as an ethical and legal principle, but important gaps remain in detailed legal knowledge and, particularly, in its practical implementation. The findings reveal a clear disconnect between ethical recognition and procedural practice. Strengthening undergraduate and continuing education in legal requirements, mandatory reporting, documentation, and confidentiality-related decision-making may help translate professional values into consistent and legally secure clinical practice.

P-78: DIGITAL PROFESSIONALISM IN DENTISTRY: A KAP STUDY AMONG TUNISIAN DENTISTS

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Introduction: Social media is increasingly integrated into dental practice, offering opportunities for patient education, professional visibility, health promotion, and dentist–patient communication. However, its growing use raises ethical and professional concerns regarding confidentiality, informed consent, professional boundaries, online advertising, and the distinction between health education and commercial promotion. This study aimed to assess the knowledge, attitudes, and practices (KAP) of Tunisian dentists regarding professional social media use, with particular emphasis on digital professionalism and its ethical implications for the dentist–patient relationship.

Methods: A descriptive cross-sectional study was conducted among licensed dentists practicing in Tunisia. Data were collected between July 1 and August 1, 2025, using a structured, self-administered, anonymous online Knowledge, Attitudes, and Practices (KAP) questionnaire distributed via Google Forms. Participants were recruited through voluntary convenience sampling. The questionnaire explored socio-professional characteristics, professional social media use, awareness of ethical guidelines and e-professionalism, attitudes toward online communication and professional boundaries, patient confidentiality, and social media practices. Data were analyzed descriptively.

Results: A total of 103 dentists participated. Most respondents were women (83.3%), and 51% were aged over 35 years. Only 38.2% reported using social media for professional purposes, and 29.4% maintained a professional account dedicated to sharing clinical cases. Although 83.3% recognized that online promotion of dental services may be subject to ethical or legal restrictions, only 48% were aware of specific ethical guidelines governing social media use in healthcare, and only 28.4% reported familiarity with the concept of e-professionalism. Awareness of patient confidentiality was generally high, with 88 respondents recognizing the need for written consent before sharing identifiable patient information or images. However, important uncertainties persisted regarding online professional boundaries: 61.8% considered responding to private patient questions through direct messages inappropriate, while 84.3% agreed that distinguishing patient education from commercial promotion online can be difficult. Ethical dilemmas related to social media were reported by 14.4% of respondents. Professional use was generally limited and infrequent, with 44% reporting that they never posted professional content.

Conclusion: Social media represents a valuable but still underutilized tool for professional communication and oral health promotion among Tunisian dentists. The findings reveal a gap between awareness of fundamental ethical principles and familiarity with formal digital professionalism frameworks. While confidentiality and patient identity protection were generally well recognized, important uncertainties remained regarding professional boundaries, online communication, and the distinction between health education and commercial promotion. These findings highlight the need to integrate digital professionalism into undergraduate and continuing dental education and to develop clear professional guidance for ethical social media use. Such measures may help

MÉDECINE PRÉVENTIVE ET COMMUNAUTAIRE

P-79: TOBACCO USE AMONG YOUTH IN JENDOUBA

GOVERNORATE

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Introduction: Smoking is a major public health issue, especially with an increasingly early age of initiation. The objectives of our study were to estimate the prevalence of smoking among young adolescents in Jendouba governorate and to identify factors associated with smoking behavior.

Methods: This was a cross-sectional study conducted at the Jendouba School and University Center from February to June 2025. We included all youths aged 12-18 who visited the center and volunteered to participate. Data were collected using a short version of the Global Youth Tobacco Survey (GYTS) questionnaire, then entered and analyzed using SPSS.

Results: A total of 522 students were included, 55% of whom were girls (sex ratio M/F of 0.82). The average age was 15.7 ± 2.1 years. Overall, 17.4% had already used tobacco, 49.5% of whom had smoked in the previous month. The first cigarette was reported before the age of 12 in 28% of cases. About half of smokers (50.5%) had attempted to quit 51% believed they could quit smoking if they wanted to. E-cigarette and waterpipe use were reported by 10.3% and 5.1% of students, respectively. Most respondents recognized the harmful effects of tobacco (85%) and supported smoking bans in public places (88%). Independent factors associated with tobacco use were male sex ($p < 0.001$), age > 14 years ($p = 0.007$), and having friends who smoke ($p < 0.001$).

Conclusion: Our study highlights the significant prevalence of smoking among adolescents in Jendouba. Implementation of appropriate intervention plans targeting young people is necessary, in addition to the strengthening of existing anti-smoking policies

P-80: KNOWLEDGE GAPS IN TUNISIAN PATIENTS WITH CHRONIC HEPATITIS B

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Introduction: Adequate knowledge about hepatitis B virus (HBV) is essential for prevention and disease management. However, knowledge gaps may persist among patients with chronic hepatitis B (CHB). We assessed HBV-related knowledge among Tunisian patients with CHB, identified major misconceptions, and explored factors associated with inadequate knowledge.

Methods: We conducted a cross-sectional study in 2025 among 80 patients with CHB attending the hepatology clinic of Farhat Hached University Hospital, Sousse, Tunisia. HBV-related knowledge was assessed using a 22-item Arabic-language questionnaire covering transmission, complications, prevention, and disease characteristics. Factors associated with inadequate knowledge were analyzed.

Results: The mean age was 44 ± 11 years with 58.8% women. Overall, 66.3% of participants had inadequate knowledge. Major gaps concerned identification of the causal agent (53.8% correct), mother-to-child transmission (43.8% correct), and transmission through shared kitchen utensils (53.8% correctly excluded). Knowledge was highest for blood

exposure (80.0%) and injection drug use (87.5%), while 60.0% recognized transmission through shared personal items. Most participants recognized cirrhosis (87.5%) and hepatocellular carcinoma (80.0%) as potential complications. Inadequate knowledge was more frequent among men (72.7% vs. 61.7%, $p = 0.023$) and older patients (100% in > 60 years vs. 48.1% in < 40 years, $p = 0.01$). Lower education was strongly associated with inadequate knowledge (83.3% without formal education, 82.4% with primary education vs. 28.6% with higher education, $p < 0.001$). Inadequate knowledge was also more frequent among untreated patients (74.5% vs. 54.6%, $p = 0.005$).

Conclusion: Substantial knowledge gaps persist despite specialist care, particularly regarding transmission and prevention, highlighting the need for targeted, culturally adapted patient education.

P-81: MORTALITY AMONG YOUNG PEOPLE IN TUNISIA, 2020

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Introduction: According to the World Health Organization (WHO), young people are defined as individuals aged 15–24 years. In 2020, approximately 1.3 million deaths among young people aged 15–24 years were recorded worldwide. Mortality data are provided by the National Information System on Causes of Death (SICD) through national mortality statistics, which constitute an important source of information for identifying the leading causes of death in the Tunisian population. However, the reliability of these data depends on the completeness of the SICD coverage, which is essential to ensure data representativeness, as well as on the completeness and quality of medical death certification.

The objective of this study was to provide an epidemiological overview

Methods: A descriptive study was conducted using data from the National Information System on Causes of Death (SICD). Data were extracted from medical death certificates (MDCs) received by the National Institute of Public Health (INSP) for deaths occurring in 2020 and coded according to ICD-10.

Proportional mortality among young people was calculated as the proportion of deaths at ages 15–24 years (WHO definition) among all deaths. Death coverage was calculated as the ratio of deaths at ages 15–24 years reported to the SICD to those recorded by the National Institute of Statistics (INS). Data were entered and analyzed using SPSS.

Results: A total of 46,420 medical death certificates were collected, representing 61.2% of all recorded deaths. Proportional mortality among young people was 0.8% ($n = 367$), with a death coverage rate of only 40.7%. The male-to-female sex ratio was 2.2, with a median age of 20 years (IQR: 17–22). The leading causes of death were external causes, including transport accidents (27.5%), followed by cancers (12.8%), diseases of the circulatory system (7.1%), nervous system diseases (6.5%), respiratory diseases (4.9%), digestive system diseases (4.1%), COVID-19 (4.1%), certain infectious and parasitic diseases (3.5%), and chromosomal abnormalities and congenital malformations (3.5%).

Conclusion: Our study highlighted the low level of death coverage among young people in Tunisia, which may be explained by the failure to receive the final medical death certificates at the INSP following autopsy. This emphasizes the importance of strengthening collaboration with forensic medicine services in

order to obtain more complete and comprehensive mortality data for this vulnerable population.

Worldwide, external causes are the leading cause of death among young people, while in France, cancer is the third leading cause of death after road traffic accidents and suicide.

P-82: FACTORS ASSOCIATED WITH BREAST SELF-EXAMINATION PRACTICES AMONG WOMEN IN MONASTIR, TUNISIA

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Introduction: Breast self-examination (BSE) is a simple and accessible method for early breast cancer detection, yet its regular practice in Tunisia remains limited. This study aimed to identify factors associated with monthly BSE practice among women in Monastir, Tunisia.

Methods: A cross-sectional analytical study was conducted in four primary healthcare centers in Monastir between May and October 2023. We included women aged 20 years and older who attended participating centers during the survey period and provided informed consent. Women with a personal history of breast cancer or incomplete questionnaires were excluded. Data were collected using a structured questionnaire. Univariate and multivariate logistic regression analyses were performed. **Results** were expressed as adjusted odds ratios (aORs) and 95% confidence intervals (95% CIs). Statistical significance was set at $p < 0.05$.

Results: Among 439 women included, 80.6% had received information about BSE as an early detection method, and 53.1% reported monthly practice. In the univariate analysis, age ($p < 0.001$), marital status ($p = 0.001$), educational level ($p = 0.010$), number of children ($p = 0.039$), family history of breast cancer ($p = 0.026$), and knowledge of BSE as an early detection method ($p = 0.001$) were significantly associated with monthly practice. In multivariate analysis, knowledge of BSE as an early detection method (aOR=6.38; 95% CI: 3.41-11.90), family history of breast cancer (aOR=2.03; 95% CI: 1.07- 3.87), and age (aOR=1.042; 95% CI: 1.024-1.060) remained independently associated.

Conclusion: Monthly BSE practice was moderate despite high knowledge of its role in early detection. Targeted health education in primary care may promote regular practice, particularly among younger women without a family history.

P-83: BARRIERS TO TELEREHABILITATION PRACTICE AMONG PHYSIOTHERAPISTS IN TUNIS, TUNISIA

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Introduction: Telerehabilitation (TR) offers opportunities to improve access to care, but its implementation remains limited. Identifying barriers to TR practice is essential to support its integration. This study aimed to identify the main barriers to TR practice among physiotherapists in Tunis.

Methods: A cross-sectional study was conducted in March 2023 with a representative sample of physiotherapists practicing in the private sector in the Greater Tunis region (governorates of Tunis, Ariana, Manouba, and Ben Arous). Data were collected using a standardized face-to-face questionnaire with a specific section on perceived barriers to TR practice. Data analysis was descriptive.

Results: A total of 200 physiotherapists were included, 86.5% of whom were women, with a median age of 32 years (IQR [29–36]). The percentage of participants who had previously practiced TR was 29% (58/200). These participants were asked about barriers encountered. The main reported barrier was the absence of physical contact with patients (56.9%). Other frequently cited barriers included communication difficulties between physiotherapists and patients (22.4%), technical complexity of tools used (15.5%), and lack of infrastructure adapted to TR (10.3%).

Conclusion: The absence of physical contact was the main barrier to TR practice among physiotherapists. Other barriers were primarily technical and organizational. Promoting TR integration in Tunisia requires strengthening training and providing adequate technical and logistical support, while emphasizing its role as a complementary approach to in-person care.

P-84: MIGRATION INTENTIONS AND PROFESSIONAL MOBILITY DYNAMICS AMONG RESIDENT PHYSICIANS IN TUNISIA

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Introduction: Medical brain drain heavily burdens healthcare systems in low and middle-income countries, exacerbating physician shortages. Understanding Tunisian residents' migration intentions and mobility trajectories is essential for designing effective retention policies and anticipating future medical workforce shortages. This study aimed to assess migration intentions, certainty, preferred destinations, long-term perspectives, and social/professional influences among Tunisian medical residents.

Methods: A cross-sectional survey was conducted among medical residents across various specialties at the Faculty of Medicine of Sousse via a Google Forms questionnaire, with multiple reminders. Data covered sociodemographic, residency level, migration intentions, destinations, perspectives, and social/peer influences. Statistical analysis was performed using SPSS.

Results: Among 101 residents (mean age 28.76 $\pm$ 3.20 years, 86.1% female), most were in their third (30.7%) or second year (28.7%). Predominant specialties were Family Medicine (38.6%) and Medical specialties (34.7%). Post-residency, 56.4% intended to migrate, 21.8% were undecided, and 21.8% planned to stay. High project certainty was reported by 53.5%. Leading destinations were France (67.3%), Gulf countries (48.5%), and other EU nations (46.5%). Regarding long-term perspectives, 10.9% intended permanent migration, whereas 51.5% foresaw returning to Tunisia after acquiring skills/sub specialization (22.8%) or financial savings (21.8%). Social influences were prominent: 96.0% had colleagues migrating or were preparing to, 78.2% relied on social networks and migrated peers for

information, and 53.5% were directly encouraged by hospital seniors.

Conclusion: Migration intentions were highly prevalent among Tunisian residents. Retaining medical expertise requires addressing migration drivers and return conditions. Retention strategies must prioritize improving working conditions, career opportunities, and postgraduate training in Tunisia.

P-85: MOTIVATING FACTORS AND BARRIERS TO PHYSICAL ACTIVITY PRACTICE AMONG ADOLESCENT

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Introduction: Understanding the determinants of physical activity among adolescents is crucial for effective health promotion. This study aims to identify motivating factors and barriers to physical activity among adolescents .

Methods: Descriptive cross-sectional study conducted in a private middle school in Sousse. Data were collected via a standardized questionnaire administered from November 2024 to February 2025.

Results: The study included 226 adolescents (mean age: 13.39 ± 0.86 years). The main factors motivating adolescents to practice physical activity were: pleasure associated with practice (70.4%, n = 159), improvement of physical health (65.0%, n = 147), and sports competition (42.9%, n = 97). Weight control represented a motivating factor for 39.8% of adolescents (n = 90). Some factors showed variations by sex: sports competition was significantly more motivating for boys (52.6%) than for girls (32.7%) (p = 0.003), while weight control was more important for girls (49.1% vs 31.0%, p = 0.006). Lack of time was the main barrier, reported by 71.2% of adolescents (n = 161). Domestic tasks represented the second major obstacle, mentioned by 60.6% (n = 137). Other barriers identified included lack of interest (4.4%), health problems (4.4%), aversion to physical activity (3.5%), financial constraints (3.5%), and safety concerns (0.9%). No significant difference was observed between boys and girls regarding reported barriers

Conclusion: Pleasure and health improvement are the primary motivations. Interventions should reduce temporal and domestic obstacles while emphasizing health benefits.

P-86: VIRAL HEPATITIS B VIRUS IN A TUNISIAN PREMARITAL SCREENING PROGRAM: SEROPREVALENCE AND RISK FACTORS

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Introduction: Hepatitis B virus (HBV) infection remains a global public health concern, and premarital screening offers an important opportunity for early detection, prevention of transmission within couples, and reduction of transmission to this virus. This study aimed to determine the prevalence of HBV infection among individuals undergoing premarital screening and to identify their associated factors.

Methods: A cross-sectional study was conducted among individuals undergoing premarital screening. HBV status was determined by HBsAg testing. Sociodemographic, behavioral, and clinical variables were collected using a standard tool. Multivariate analysis was performed to identify independent factors associated with HBV positivity.

Results: Among 2,012 participants, 1012 (50.3%) were males giving a male to female ratio of 1.01. The median age of the study sample was 29 years (Interquartile range (IQR)= [26-34]). Of all, 135 participants were divorced (6.7%), 106 subjects (5.2%) had unprotected sex. The overall prevalence of HBV infection was 1% (n=20).

Multivariate analysis showed that male gender (Adjusted odds ratio (AOR)=3; p=0.026), age > 35 years (AOR)=6.8; p<0.001), being divorced or widowed (AOR=5.4; p=0.001), illiterate or primary educational level (AOR=3.1; p=0.022) as well as unprotected sex (AOR=10.3; p<0.001), diabetes (COR=13.3; p<0.001) and O blood group (AOR=2.4; p=0.049) were independently associated with HBV.

Conclusion: The prevalence of HBV among premarital screening candidates was low, consistent with a low-endemicity setting likely shaped by sustained vaccination coverage. However, the persistence of infection among older individuals and those reporting unprotected sexual contact underscores the continued relevance of premarital screening as a case-finding and counseling opportunity

P-87: SEX DISPARITIES IN OBESITY AND PHYSICAL ACTIVITY AMONG TUNISIAN ADULTS: FOCUS ON THE ELDERLY

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Introduction: Obesity is a major cardiovascular risk factor and a growing public health concern worldwide. In Tunisia, obesity and insufficient physical activity are important modifiable risk factors, particularly among elderly individuals, as age-related changes may affect cardiometabolic health. The study aimed to describe sex disparities in obesity and physical activity among Tunisian adults, with particular attention to those aged ≥65 years.

Methods: Data were obtained from the Tunisia Health Examination Survey (THES 2016), a national cross-sectional survey of individuals aged ≥15 years. Elderly individuals were defined as those aged ≥65 years. Obesity was defined as BMI

≥ 30 kg/m². Insufficient physical activity was defined according to WHO recommendations as <60 minutes/day for adolescents and <150 minutes/week of moderate-intensity activity (or equivalent) for adults (≥ 18 years). Female-to-male prevalence ratios (F/M) and odds ratios (OR) with 95% confidence intervals (95% CI) were calculated.

Results: In the total sample (N=9212), obesity prevalence was 33.6% in women and 21.1% in men (F/M=1.6). Insufficient physical activity was 70.1% in women and 78.3% in men (F/M=0.90). Among elderly individuals (≥ 65 years; n=155), obesity prevalence was 46.3% in women and 18.8% in men (OR=3.72; 95% CI: 2.34–5.93). Insufficient physical activity was 83.1% in women and 81.1% in men (OR=0.77; 95% CI: 0.47–1.27).

Conclusion: Obesity was more prevalent among women, particularly among elderly individuals, while no sex difference was observed in insufficient physical activity. These findings highlight the need for sex- and age-specific approaches to obesity prevention, particularly among elderly women, within cardiovascular disease prevention strategies in Tunisia.

P-88: DIABETES AMONG TEACHERS IN SOUTHERN TUNISIA: PREVALENCE AND ASSOCIATED FACTORS

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Introduction: Diabetes is a major risk factor for cardiovascular diseases and represents a significant public health challenge. Occupational psychosocial factors, particularly chronic stress, may contribute to the development of metabolic disorders. Teachers, who are exposed to specific organizational and relational constraints, represent a potentially at-risk population. This study aimed to estimate the prevalence of detected diabetes among teachers in the Governorate of Sfax (southern Tunisia) and to identify associated factors.

Methods: A descriptive and analytical cross-sectional study was conducted during the 2020–2021 school year among a representative sample of teachers working in public primary and secondary schools in the Governorate of Sfax. Sociodemographic, professional, and psychosocial data were collected using a standardized questionnaire. Detected diabetes was identified as part of a screening campaign carried out during the study. A univariate analysis with estimation of Odds Ratios (OR) was performed.

Results: A total of 484 teachers were included. The median age was 48 years (IQR [41–53]) and 57.9% were women. The majority of participants (81.6%) had more than 10 years of professional seniority. The prevalence of detected diabetes was 4.3% (n = 21).

Diabetes was significantly associated with living in a rural area (OR = 2.9; p = 0.03), current smoking (OR = 2.4; p = 0.04), problems with students' parents (OR = 4.2; p = 0.001), excessive demands from parents (OR = 10.8; p = 0.001), the feeling of having to justify oneself to parents (OR = 8.4; p = 0.001), problems with the administration (OR = 12.9; p = 0.001), dissatisfaction with colleagues' support (OR = 3.3; p = 0.011), lack of motivation (OR = 2.4; p = 0.039), as well as the spouse's

profession (p = 0.014).

Conclusion: The prevalence of detected diabetes among public sector teachers in Sfax is not negligible. The observed associations with occupational psychosocial factors suggest a potential impact of working conditions on metabolic health. These **Results** highlight the need for integrated prevention strategies including early screening and interventions aimed at improving the professional environment and psychosocial support.

P-89: SELF-PERCEPTION OF PHYSICAL ACTIVITY AND CORRESPONDENCE WITH SELF-REPORTED PRACTICE

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Introduction: This study aims to compare adolescents' self-perception of physical activity with their actual self-reported practice.

Methods: Descriptive cross-sectional study conducted in middle school in Sousse via a standardized questionnaire administered from November 2024 to February 2025.

Results: The study included 226 middle schoolers (51.3% boys, mean age: 13.39 ± 0.86 years). Regarding direct self-perception, 41.6% of adolescents (n = 94) perceived themselves as active, 39.8% (n = 90) described themselves as moderately active, 11.9% (n = 27) considered themselves as very active, and 6.6% (n = 15) perceived themselves as inactive. Analysis by sex reveals a significant difference: 61.2% of boys perceived themselves as active or very active compared to 45.5% of girls (p = 0.006). The evaluation of physical activity level compared to peers showed that 27.4% of middle schoolers (n = 62) considered themselves more active than their peers, while 21.7% (n = 49) perceived themselves as less active. However, the majority (50.9%, n = 115) estimated they had no significant difference with others. A sex disparity was notable: 34.5% of boys perceived themselves as more active compared to their peers, while girls tended to perceive themselves as less active (p = 0.004). Regarding the frequency of achieving ≥ 60 minutes of MVPA per day, only 8.4% (n = 19) reported meeting this WHO recommendation.

Conclusion: Most adolescents perceive themselves as active, although only 8.4% meet WHO recommendations, suggesting an overestimated perception, particularly among boys. Interventions should address this bias and promote realistic awareness.

P-90: BRIDGING THE BREAST CANCER INFORMATION GAP: SOURCES OF INFORMATION AND THE PERCEIVED ROLE OF FIRST-L

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Introduction: Breast cancer remains a major public health concern and the most common cancer among women. Adequate awareness and access to reliable information are essential for

promoting early detection and appropriate screening practices. First-line physicians are strategically positioned to provide accurate information and encourage breast cancer prevention and screening. This study aimed to assess the main sources of breast cancer information and explore Tunisian women's perceptions of the role of first-line physicians in breast cancer awareness and screening promotion.

Methods: A cross-sectional study was conducted during pink October 2025 among 240 adult women attending primary healthcare facilities, health centers and breast cancer screening campaigns. Data were collected using a pre-tested, self-administered electronic questionnaire in Tunisian Arabic. The questionnaire assessed sociodemographic characteristics, breast cancer knowledge, sources of information, attitudes and perceptions, exposure to physician counseling, trust in healthcare professionals, and screening practices. Breast cancer knowledge was assessed using 16 items, with a total score ranging from 0 to 16.

Results: Among the 240 participating women, the largest age group was 40–49 years (30%); 73.3% lived in urban areas and 54.6% had a higher education level. Mass media was the most frequently reported source of breast cancer information (60%), followed by family/social networks and healthcare professionals. The mean knowledge score was $7.72 \pm 3.63/16$, with 48.8% of women having low knowledge, 35.4% moderate knowledge, and only 15.8% high knowledge. Although 60.8% of women reported receiving breast cancer-related information during a medical consultation, only 46.3% stated that a physician had clearly explained the benefits and limitations of screening. Trust in physicians was very high (92.9%), suggesting a strong potential for first-line physicians to serve as trusted sources of evidence-based breast cancer information.

Conclusion: Among the 240 participating women, the largest age group was 40–49 years (30%); 73.3% lived in urban areas and 54.6% had a higher education level. Mass media was the most frequently reported source of breast cancer information (60%), followed by family/social networks and healthcare professionals. The mean knowledge score was $7.72 \pm 3.63/16$, with 48.8% of women having low knowledge, 35.4% moderate knowledge, and only 15.8% high knowledge. Although 60.8% of women reported receiving breast cancer-related information during a medical consultation, only 46.3% stated that a physician had clearly explained the benefits and limitations of screening. Trust in physicians was very high (92.9%), suggesting a strong potential for first-line physicians

P-91: PERTUSSIS VACCINATION ACCEPTANCE AMONG PREGNANT WOMEN. BIZERTE 2026

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Introduction: Pertussis is a major public health problem worldwide with significant morbidity and mortality. WHO recommends Pertussis vaccination during pregnancy as an effective preventive measure. In Tunisia, outbreaks of pertussis still occurring and maternal vaccination have been recently included in the national immunization schedule (January 2026) but data on pregnant women acceptance are lacking. Aim: To assess Pertussis vaccination acceptance among pregnant women in Bizerte Governorate and its associated factors to

guide vaccination strategy

Methods: A descriptive cross-sectional study was conducted among pregnant women attending antenatal care at public facilities in Bizerte (all PHCs, the regional and teaching levels) through face-to-face interviews using a structured Health Belief Model-based electronic questionnaire (KoboToolbox). Sample size was calculated with Open-Epi. Data analysis was performed using SPSS (descriptive analysis and logistic regression)

Results: Of 430 women approached, 385 were included (93%). The mean age 30.6 ± 3.6 years. Overall, 47.3% were willing to be vaccinated if recommended, and 87.3% would discuss it with a provider. Fear of adverse effects was the main barrier (%). On univariate analysis, acceptance was significantly higher among women attending primary healthcare centers than university/regional hospitals (OR=1.84, 95%CI: 1.20–2.81) and among those with a family history of pertussis (OR=4.06, 95%CI: 1.79–9.22), but significantly lower among women with a personal medical history (OR=0.43, 95%CI: 0.19–0.96).

Conclusion: Despite a high perceived severity of pertussis, awareness of maternal vaccination was very low among pregnant women in Tunisia contrasting with vaccine willingness. These findings highlight the need for tailored education, targeted communication on vaccine safety and effectiveness.

MICROBIOLOGIE

P-92: UROPATHOGENS AND ANTIMICROBIAL RESISTANCE IN A UROLOGY DEPARTMENT: A TWO-YEAR RETROSPECTIVE STUDY

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Introduction: Antimicrobial resistance has increasingly challenged the management of urinary tract infections, particularly in healthcare-associated urological settings. Reliable knowledge of the local uropathogen profile and resistance landscape is essential to improve empirical antibiotic selection and reduce inappropriate antimicrobial exposure. The aim of the study was to investigate the distribution of urinary pathogens and their antimicrobial susceptibility profiles among patients admitted to or attending a urology department.

Methods: A retrospective study was conducted at the Microbiology Laboratory of Habib Bourguiba University Hospital, Sfax, Tunisia, over a two-year period (2024–2025). Urine specimens collected from hospitalized and ambulatory patients in the urology department were analyzed by routine microbiological culture. Bacterial identification was performed using VITEK® 2 or API® systems. Antimicrobial susceptibility testing was performed according to CA-SFM recommendations.

Results: Among 1,615 urine cultures analyzed, the mean patient age was 61 years. Significant bacterial or fungal growth was detected in 521 samples (32.3%), while 204 cultures (12.6%) were classified as contaminated. Most positive cultures were monomicrobial (74.5%), yielding 615 isolates overall. *Escherichia coli* was the predominant isolate (27.5%), followed by *Candida* spp. (17.1%), *Klebsiella pneumoniae* (13.2%), *Enterococcus faecalis* (11.5%), and *Pseudomonas aeruginosa* (6.6%).

Among Enterobacterales, the highest resistance rates were observed for amoxicillin-clavulanic acid (53.9%) and ciprofloxacin (40.0%), followed by trimethoprim-sulfamethoxazole (37.6%) and third-generation cephalosporins

(34.8%). Resistance remained lower to fosfomycin (13.2%) and imipenem (5.5%). Among enterococci, high-level gentamicin resistance reached 94.9%, while resistance to levofloxacin and trimethoprim-sulfamethoxazole was 48.5% and 32.0%, respectively.

Conclusion: The findings demonstrate a high level of antimicrobial resistance among urinary pathogens, underscoring the need for ongoing local surveillance to guide empirical therapy and strengthen antimicrobial stewardship.

P-93: ANTIMICROBIAL RESISTANCE TRENDS IN HAEMOPHILUS INFLUENZAE: A FIVE-YEAR STUDY IN Sfax, TUNISIA

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Introduction: Haemophilus influenzae is a strictly human pathogen responsible for a broad spectrum of infections, ranging from respiratory infections to potentially severe invasive diseases. The increasing emergence of antimicrobial resistance represents a major therapeutic challenge.

The aim of the study was to investigate the epidemiological and microbiological characteristics of H. influenzae isolates and to assess their antimicrobial susceptibility profiles.

Methods: A retrospective study was conducted at the Microbiology Laboratory of Habib Bourguiba University Hospital, Sfax, Tunisia. Clinical specimens collected from patients attending or hospitalized in different departments of Habib Bourguiba and Hedi Chaker University Hospitals were analyzed over the study period (2021–2025). Bacterial identification was performed using conventional Methods, and antimicrobial susceptibility testing was interpreted according to CA-SFM recommendations.

Results: A total of 495 H. influenzae isolates were recovered. Most isolates were obtained from non-invasive specimens (95.4%), predominantly respiratory samples (84.9%). Invasive specimens accounted for 4.6% of isolates, including deep pus, blood cultures, and cerebrospinal fluid. Adults represented 54.2% of the cases. β -lactamase production was detected in 31% of isolates. Resistance rates increased over the study period, particularly for amoxicillin-clavulanic acid (from 9.7% in 2021 to 26% in 2025), cefotaxime (from 6.5% to 12.6%), and ciprofloxacin (from 6.5% to 20.2%).

Conclusion: H. influenzae remains an important pathogen, with β -lactamase production and increasing antimicrobial resistance posing challenges to treatment. Continuous surveillance of resistance patterns is essential to guide appropriate therapy and support effective antimicrobial stewardship.

NÉPHROLOGIE

P-94: PROFILE OF DIABETIC PATIENTS AT THE INITIATION OF RENAL REPLACEMENT THERAPY

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Introduction: Diabetes is the leading cause of end-stage renal disease (ESRD) and dialysis initiation, due to its increasing

prevalence and longer life expectancy. Diabetic patients often present a distinct profile at the time of renal replacement therapy initiation (RRT).

The aim of this study was to describe their clinical, paraclinical, epidemiological, and social characteristics.

Methods: This was a retrospective, descriptive, single-center study conducted in the Department of Nephrology, Dialysis, and Renal Transplantation at La Rabta University Hospital. It included 240 diabetic patients who initiated RRT for ESRD between January 2019 and December 2024.

Results: The mean age of the patients was 60.75 ± 11.58 years, with a male-to-female ratio of 2.24. Type 2 diabetes accounted for 88.3% of cases. The socioeconomic level was low or medium in 97.1% of patients. Hypertension and dyslipidemia were present in 93.8% and 53.75% of patients, respectively, and 85.8% had diabetic degenerative complications. The mean duration between diabetes diagnosis and dialysis initiation was 15.8 ± 9.5 years, and the mean nephrology follow-up duration was 32.9 ± 39.1 months. Urgent initiation of hemodialysis was required in 40% of patients, with the first session performed via a temporary femoral catheter in 82.5% of cases. Hemodialysis was the most frequently chosen modality (97.9%), while five patients opted for peritoneal dialysis. Cardiovascular and infectious events occurring after the initiation of dialysis were observed in 27 and 17 patients, respectively. The 3-month mortality rate was 6.4%, mainly due to cardiovascular causes and infectious complications.

Conclusion: Systematic screening for diabetic kidney disease, early nephrology follow-up, and optimal management of chronic kidney disease progression factors are essential to improve the prognosis of diabetic patients at the time of RRT initiation.

P-95: RENAL INVOLVEMENT IN INFLAMMATORY BOWEL DISEASE: WHY SYSTEMATIC SCREENING IS NECESSARY

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Introduction: Inflammatory bowel diseases (IBD) are systemic disorders associated with various extraintestinal manifestations. Urological and renal manifestations remain less well characterized and may range from urinary abnormalities to severe kidney disease. We aimed to assess the prevalence and characteristics of renal involvement in patients with IBD.

To determine the prevalence and describe the clinical, biological, radiological, and histological characteristics of urological and renal involvement in patients with IBD

Methods: We conducted a retrospective observational study including all patients followed for IBD over 11 years (September 2015–April 2026). Patients with another condition potentially explaining urological or renal involvement were excluded.

Results: Among 128 patients, mean age was 37.35 years (range, 14–75), with a male-to-female ratio of 1.5. Crohn's disease (CD) accounted for 74.2% and ulcerative colitis (UC) for 25.8%. Urological or renal involvement was identified in 21 patients (16.4%), including 12 men and 9 women. CD predominated (95.2%). Urinary tract infection was documented in 9 patients (42.8%), proteinuria in 6 (28.5%), and chronic kidney disease in 3, including one requiring long-term hemodialysis. Two patients developed acute kidney injury. Renal biopsy was performed in 3 patients and salivary gland biopsy in 2. Diagnoses included AA amyloidosis (n=2), membranous glomerulonephritis (n=1), undetermined glomerulonephritis (n=2), chronic tubulointerstitial nephropathy (n=3), and focal segmental

glomerulosclerosis (n=1). Urolithiasis occurred in 10 patients, while urinary fistulas were observed in 2 and required surgery.

Conclusion: Urological and renal manifestations affected 16.4% of our IBD cohort and included potentially severe kidney disease. Their often silent presentation supports systematic renal and urinary screening in IBD patients to enable early diagnosis and appropriate management.

P-96: SKELETAL INVOLVEMENT IN SECONDARY HYPERPARATHYROIDISM

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Introduction: Secondary hyperparathyroidism (SHPT) is a frequent complication of chronic kidney disease, leading to renal osteodystrophy and various skeletal complications. Bone involvement remains underreported in surgical series, despite its clinical significance.

Our aim is to determine the incidence and clinical-radiological features of bone manifestations in patients operated for SHPT.

Methods: We carried out a retrospective study in our ENT department over a period of nine years (2014–2022), including patients who underwent surgery for SHPT. Bone manifestations were collected.

Results: The cohort included 103 patients with a mean age of 40 years (range: 12–80) and a sex ratio of 0.94. The overall incidence of bone manifestations was 70.9% (n=73). Clinically, bone pain was the most frequent symptom (34.0%, n=35), followed by a history of pathological fractures (6.8%, n=7). Bone deformities were observed in 3.9% (n=4), affecting the limbs (n=2) and the trunk (n=2; including one barrel chest and one kyphoscoliosis). One patient (1.0%) presented a clinical maxillary brown tumor. Radiologically, signs of renal osteodystrophy were documented in 14.6% (n=15), mainly brown tumors across 10 locations, predominantly in the rib cage, along with focal demineralization, "salt and pepper" skull, and pelvic lesions. DEXA, available for two patients, confirmed osteoporosis.

Conclusion: Bone involvement is highly prevalent and severe in SHPT, primarily manifesting as bone pain and advanced osteodystrophy, including brown tumors, highlighting the need for timely parathyroidectomy

NUTRITION

P-97: FIELD OF STUDY AS A DETERMINANT OF EMOTIONAL EATING

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Introduction: Emotional eating is a maladaptive coping strategy linked to weight gain and poor diet quality among university students. Whether medical training modulates this risk relative to other fields remains poorly documented in North Africa. Our aim is to compare the prevalence, behavioral correlates, and risk factors of emotional eating between medical and non-

medical Tunisian university students.

Methods: A cross-sectional study was conducted among students in Sfax between September and October 2025 : medical (N1) and non-medical (N2) students. Emotional eating was assessed via the validated French DEBQ-E subscale. Univariate and multivariate regression compared groups.

Results: Among 336 students, females predominated (63.4%; 68.3% medicine vs 58.6% non-medicine). Mean BMI was 23.53 ± 3.55 kg/m²; overweight/obesity affected 28.9% overall (53.6% medicine vs 46.4% non-medicine). High-risk emotional eating reached 36.9% overall, higher in medical (56.5%) than non-medical students (43.5%; ORb=1.31, p=0.038). Daily sugary snacks (≥ 1 /day) were reported by 44.6%, associated with emotional eating (ORa=2.340, p<0.001; ORb=1.61, p<0.001). Fewer than 13% met fruit/vegetable recommendations. Only 16.3% achieved sufficient activity; 26.5% reported none. Sleep below 7 hours affected 66.7% overall, medical students overrepresented in the 6-7h category (55.1%). Alcohol use (17.6%) was more frequent in non-medical students, independently associated with emotional eating (ORa=2.144, p=0.035). Female gender (ORa=2.857, p<0.001) and BMI ≥ 25 kg/m² (ORa=4.002, p<0.001) were the strongest predictors.

Conclusion: Medical students showed significantly higher emotional eating prevalence than non-medical peers, compounded by elevated BMI, alcohol use, sugary snacks, insufficient activity, and suboptimal sleep, highlighting curricular gaps in nutrition education and stress management.

P-98: NUTRITIONAL STATUS AT INFLAMMATORY BOWEL DISEASE DIAGNOSIS AND DISEASE ACTIVITY

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Introduction: Inflammatory bowel disease (IBD) is frequently associated with nutritional disorders, traditionally considered consequences of intestinal inflammation. However, nutritional status at diagnosis may reflect disease activity and phenotype from the outset. This study aimed to assess the relationship between nutritional status at diagnosis and the clinical characteristics and subsequent course of IBD.

Methods: We conducted a prospective study including patients followed for IBD between September 2015 and September 2025. Clinical, biological, endoscopic, and radiological data were collected. Patients were classified according to body mass index (BMI) at diagnosis as underweight (<18.5 kg/m²), normal weight (18.5–24.9 kg/m²), or overweight (≥ 25 kg/m²). Comparative analyses were performed, including univariate logistic regression.

Results: A total of 126 patients were included, with a mean age of 37.3 years (range, 14–75) and a male-to-female ratio of 1.5. Median BMI was 20.98 kg/m² (range, 13–29). Underweight was observed in 31 patients (24.6%), overweight in 23 (18.3%), and normal BMI in 72 (57.1%). Underweight patients were predominantly affected by Crohn's disease (96.8%), mainly with ileal or ileocolonic involvement. No significant differences were observed between nutritional groups regarding age, sex, smoking status, disease phenotype, or anatomical complications. However, normal BMI was significantly associated with clinico-biological remission (p=0.013). During a mean follow-up of 56 months, no significant differences were observed regarding complications, use of immunosuppressive or biologic therapies, or surgery.

Conclusion: Nutritional status at IBD diagnosis did not appear to significantly influence long-term disease outcomes. However,

normal BMI was associated with clinico-biological remission, suggesting that nutritional status may reflect early inflammatory activity rather than simply represent a consequence of IBD. Early nutritional assessment should therefore be integrated into the initial management of IBD.

P-99: NUTRITION AND ANXIETY IN TREATED HYPOTHYROIDISM: IS THERE A LINK?

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Introduction: Nutrition may influence psychological well-being, yet its relationship with anxiety in treated hypothyroidism remains poorly explored.

Aim: To identify nutritional factors associated with anxiety in patients with treated, biochemically euthyroid hypothyroidism.

Methods: We conducted a 5-month analytical cross-sectional study including patients aged 18–65 years with treated, biochemically controlled hypothyroidism. Patients with major psychiatric disorders, psychotropic treatment, or comorbidities associated with anxiety were excluded. Dietary intake was assessed using dietary history via Nutrilog Online, and food consumption using a food-frequency questionnaire. Anthropometric parameters and lipid profile were also evaluated. Anxiety was assessed using the Hospital Anxiety and Depression Scale–Anxiety subscale (HAD-A). Comparative analyses and Spearman correlations were performed.

Results: Sixty-one patients were included, with a mean age of 49.7 years; 91.8% were women. Mean BMI was 30.7 kg/m². Mean energy intake was 1783±767 kcal/day, with a calculated caloric deficit in 77% of patients. Definite anxiety was found in 54.1% of patients (mean HAD-A: 11.2±6.5). Energy and macronutrient intakes were comparable between groups. Among micronutrients, vitamin D ($p=0.017$), vitamin E ($p=0.013$) and iodine ($p=0.050$) intakes were lower in anxious patients, while other micronutrients did not differ. Anxious patients also consumed less raw vegetables, fruits, olive oil, mackerel, nuts and red meat. Serum triglycerides were higher in anxious patients ($p=0.028$). HAD-A score correlated positively with carbohydrate intake ($\rho=0.294$; $p=0.022$), and inversely with lipid intake ($\rho=-0.267$; $p=0.037$), monounsaturated fatty acids ($\rho=-0.326$; $p=0.010$), iodine ($\rho=-0.265$; $p=0.039$), vitamin D ($\rho=-0.411$; $p<0.001$) and vitamin E ($\rho=-0.330$; $p=0.009$).

Conclusion: Despite comparable overall energy and macronutrient intakes between groups, higher anxiety scores were associated with higher carbohydrate intake and lower intakes of lipids, monounsaturated fatty acids, iodine, vitamin D and vitamin E.

P-100: MICRONUTRIENT SUPPLEMENT USE AFTER AGE 65: SOURCES OF INFORMATION AND PATTERNS OF USE

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Introduction: Micronutrient-based dietary supplements are frequently used by older adults¹, particularly in the context of aging and multimorbidity. However, their use may occur without medical supervision, potentially affecting the appropriateness

and duration of supplementation.

Aim To describe patterns of micronutrient supplement use and sources of information among adults aged 65 years and older in primary care.

Methods: A descriptive cross-sectional study was conducted in April 2026 in primary care settings. Patients aged ≥ 65 years who consulted a general practitioner and reported current use of micronutrient supplements were included. Data were collected using a standardized, interviewer-administered questionnaire covering sociodemographic characteristics, comorbidities, types of micronutrients used, sources of information, and duration of use.

Results: Twenty-two patients were included, with a mean age of 70.2 ± 5.7 years. Women accounted for 54.5% of participants. Eighteen patients (81.8%) had at least one chronic condition. Vitamin D and magnesium were the most commonly used micronutrients, reported by 10/22 (45.5%) and 4/22 (18.2%) patients, respectively. Medical advice and friends/family were each identified as sources of information by 9/22 patients (40.9%), while social media was reported by 4/22 (18.2%). Among the 13 patients who did not seek medical advice, 5 (38.5%) reported using supplements for more than six months.

Conclusion: In this sample, non-medical sources were reported more frequently than medical advice as sources of information on micronutrient supplementation. These findings highlight the need to strengthen patient education and medical counseling to promote safe and appropriate supplement use.

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P-101: COMPREHENSIVE NUTRITIONAL ASSESSMENT AND DETERMINANTS OF MALNUTRITION IN PATIENTS WITH NEWLY DIAGNOS

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Introduction: Malnutrition is a major comorbidity of hematologic malignancies, affecting up to 40% of patients. This study aimed to describe the nutritional status of patients with lymphoma before the initiation of chemotherapy and to identify the factors associated with malnutrition in a Tunisian referral center.

Methods: A cross-sectional, descriptive study with an analytical component was conducted in the Adult Clinical Hematology Department (November 2025 – March 2026). Seventy-two newly diagnosed lymphoma patients were assessed before chemotherapy. Parameters included anthropometric measurements, body composition (bioelectrical impedance analysis), muscle performance tests, a 24-hour dietary recall, a food frequency questionnaire, nutritional screening tools (MUST, MNA, PNI), and biological markers. Factors associated with malnutrition (HAS 2019/2021 criteria) were investigated using univariate and multivariate logistic regression.

Results: Mean age was 52.4 ± 17.4 years; 54% were male. The most common lymphoma subtype was B-cell non-Hodgkin lymphoma (60%), with 74% at an advanced stage (Ann Arbor III–IV). Seventy-six percent of patients were malnourished (53% severe, 23% moderate). Mean BMI was 24.7 ± 5.9 kg/m². Sarcopenia was present in 24% of patients. Biologically, mean serum albumin was 38.0 ± 4.9 g/L, and hypoalbuminemia was noted in 29% of patients. On nutritional screening, 73% had a high-risk MUST score (≥ 2), and 67% of elderly patients had malnutrition confirmed by the MNA. Dietary intake was markedly deficient: 78% had insufficient protein intake, 53% were hypocaloric, and 88% had inadequate calcium intake. The PNI indicated malnutrition in 65% of patients. On univariate analysis, factors significantly associated with malnutrition included: a symptom-to-diagnosis interval greater than 3 months, social isolation, substantial weight loss, hypoproteinemia, inflammatory syndrome, a hypocaloric and low-protein diet, and deficiencies in vitamins D, C, B1, B2, B3, B6, B9, and in calcium, magnesium, potassium, and zinc.

Conclusion: Malnutrition is highly prevalent in this cohort of Tunisian patients with lymphoma. The associated factors are multidimensional, encompassing clinical, functional, nutritional, and biological domains. Early, systematic nutritional assessment and timely nutritional intervention should therefore be integrated into routine oncology care from the time of diagnosis.

OPHTHALMOLOGIE

P-102: MICROPULSE TRANSSCLERAL LASER THERAPY IN REFRACTORY SECONDARY GLAUCOMA: LONGTERM OUTCOMES AND SAFETY

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Introduction: Glaucoma is a leading cause of irreversible blindness worldwide. Secondary glaucomas are often difficult to manage and may require alternative therapeutic strategies when conventional treatments fail. The aim of this study is to assess the efficacy and safety of Micropulse Transscleral Laser Therapy (MPTLT) in the treatment of refractory secondary glaucoma associated with silicone oil tamponade.

Methods: A retrospective study included 52 eyes with silicone oil-induced glaucoma treated with MPTLT between 2017 and 2023. Procedures were performed using an 810-nm diode laser with a standardized protocol. Intraocular pressure (IOP), glaucoma medication use, and postoperative outcomes were evaluated for up to 24 months. Success was defined as an IOP < 21 mmHg with or without medications.

Results: Mean baseline IOP was 29.5 mmHg and decreased significantly to 20.73 mmHg at 3 months ($p < 0.001$) and 19.38 mmHg at 24 months. The mean number of glaucoma medications decreased from 3.37 to 2.19 at one year. Retreatment was required in 17.41% of cases and provided additional IOP reduction. Complications were mild, with conjunctival hyperemia being the most common (43.5%). No severe adverse events, including phthisis bulbi, were reported.

Conclusion: MPTLT is an effective and safe option for refractory secondary glaucoma, achieving sustained IOP reduction with minimal complications and reduced medication burden. These findings support its role as a valuable treatment alternative in difficult-to-control glaucoma cases.

P-103: DIABETIC RETINOPATHY AND MACULAR EDEMA IN THE CAP BON REGION: EPIDEMIOLOGY AND RISK FACTORS

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Introduction: Diabetic retinopathy (DR) and diabetic macular edema (DME) are among the leading causes of visual impairment and blindness in working-age adults worldwide, representing a major public health concern. Assessing their burden and associated risk factors is essential for improving preventive and therapeutic strategies. The aim of this study is to evaluate the prevalence and clinical patterns of DR and DME in the Cap Bon region and to identify the main factors associated with diabetic ocular involvement.

Methods: A retrospective study was conducted at the Department of Ophthalmology of Tahar Maamouri Hospital, Nabeul, Tunisia, between October 2025 and June 2026. Demographic and clinical data were collected, along with findings from comprehensive ophthalmic examinations, fluorescein angiography, and optical coherence tomography.

Results: Among 2,000 examined patients, 260 (13%) had diabetes mellitus. DR was diagnosed in 98 patients (37.7%), including mild non-proliferative DR in 26 cases (10%), moderate non-proliferative DR in 28 (10.8%), severe non-proliferative DR in 14 (5.4%), and proliferative DR in 30 (11.5%). Complications of proliferative DR included vitreous hemorrhage (11 cases), tractional retinal detachment (7 cases), and neovascular glaucoma (4 cases). Diabetic maculopathy was identified in 72 patients (27.7%), including 38 cases of clinically significant DME. The presence of ocular complications was significantly associated with longer diabetes duration, hypertension, and dyslipidemia.

Conclusion: The high prevalence of advanced diabetic retinal disease observed in this study highlights persistent delays in diagnosis and management. These findings underscore the need to strengthen early screening programs and improve access to specialized ophthalmic care in order to reduce the burden of vision-threatening diabetic complications.

P-104: MACULAR EDEMA ASSOCIATED WITH RETINAL VASCULITIS: CLINICAL FEATURES AND THERAPEUTIC CHALLENGES

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Introduction: Retinal vasculitis, whether idiopathic or associated with systemic inflammatory diseases such as Behçet's disease, frequently leads to sight-threatening complications. Among these, macular edema (ME) represents one of the most common and visually disabling manifestations, often resistant to conventional therapy and responsible for significant visual impairment when left uncontrolled. Its management remains challenging, as its course may be independent of the underlying vasculitic activity. This study, conducted at the Regional Hospital of Tozeur, Tunisia, aimed to illustrate the severity and therapeutic challenges of macular edema associated with

retinal vasculitis.

Methods: This was a retrospective study of 10 eyes from 8 patients followed for retinal vasculitis complicated by macular edema at the Regional Hospital of Tozeur. All patients underwent a complete ophthalmological examination, fluorescein retinal angiography, and optical coherence tomography (OCT) before and after treatment, along with a targeted etiological work-up. First-line treatment consisted of systemic or intravitreal corticosteroids. Second-line treatment was based on immunosuppressive agents.

Results: Behçet's disease was identified in 5 cases, while vasculitis was considered idiopathic in the remaining 3 patients after an exhaustive etiological investigation. Complete regression of both retinal vasculitis and macular edema following combined corticosteroid and immunosuppressive therapy was observed in all 5 patients with Behçet's disease and in 1 patient with idiopathic vasculitis.

Conclusion: Macular edema is a severe complication of retinal vasculitis and may evolve independently of the underlying inflammatory activity. First-line treatment relies on systemic or intravitreal corticosteroids, which may prove insufficient when used alone, particularly in pediatric patients. Anti-TNF- α agents appear to represent an effective therapeutic option in cases refractory to conventional immunosuppressive therapy. This series highlights the therapeutic complexity of macular edema associated with retinal vasculitis and the importance of early recognition and appropriate escalation of treatment.

P-105: EPIDEMIOLOGICAL PROFILE AND REFRACTIVE ERRORS IN CHILDREN WITH TYPE 1 DIABETES AT A TERTIARY CENTER

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Introduction: Diabetes mellitus is a major public health problem. Its prevalence is increasing significantly worldwide. Type 1 diabetes (T1D) develops most often during childhood or adolescence. It is the third most common chronic disease among children.

Aim : To describe the epidemiological profile of children with type 1 diabetes mellitus and to determine characteristics of refractive errors in the population

Methods: We conducted a single-center, cross-sectional, descriptive study in the ophthalmology department of the Tahar Sfar Mahdia University Hospital over a 6-month period from July to December 2025. This study included patients with T1D aged from 8 to 18 years with T1D diagnosed for at least 2 years before enrollment, and we assessed their epidemiological profiles and refractive errors.

Results: Sixty one children with T1D aged between 8 and 18 years were included. The mean age was 12.6 ± 2.9 . The male to female ratio was 1.10, with 32 boys (52.5%). The average age at diagnosis of diabetes was 6.9 ± 3.6 years, ranging from 1 year to 14 years. The mean HbA1c at enrollment was $10.08 \pm 1.49\%$, with values ranging from 7.33% to 14.76%.

The average insulin dose was 0.8 ± 0.2 IU/kg/day (ranges : 0.24 IU/kg/day to 1.35 IU/kg/day).

The mean spherical refractive error was $+0.42 \pm 0.87$ diopters while the mean cylindrical error was -0.47 ± 0.36 diopters. The mean spherical equivalent was 0.18 ± 0.90 diopters. No significant association was found between refractive errors and clinical characteristics of diabetes.

Conclusion: The epidemiological profile was characterized by early onset T1D, predominantly rural origin and frequent familial and autoimmune associations. Glycemic control was generally poor . Refractive errors were mild with a mean spherical equivalent close to emmetropia.

P-106: SCLERITIS IN CLINICAL PRACTICE: ETIOLOGICAL SPECTRUM, TREATMENT CHALLENGES, AND LONG-TERM OUTCOMES

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Introduction: Scleritis is a potentially vision-threatening inflammatory disease often associated with autoimmune or infectious disorders and requires prompt etiological assessment. The aim of this study is to evaluate the clinical characteristics, etiologies, management, and outcomes of scleritis.

Methods: Prospective observational study including 14 eyes of 13 patients diagnosed with scleritis between January 2025 and January 2026 in a Tunisian tertiary referral center. Clinical presentation, etiological findings, treatment modalities, and outcomes were analyzed.

Results: The mean age was 43 years, with an equal sex distribution. Nodular scleritis was the most common subtype (n=9 eyes), followed by diffuse scleritis (n=3 eyes) and necrotizing scleritis (n=2 eyes). An underlying cause was identified in 10 cases. Inflammatory etiologies included sarcoidosis (n=2), giant cell arteritis (n=1), Sjögren's syndrome (n=1), rheumatoid arthritis (n=1), Behçet's disease (n=1), granulomatosis with polyangiitis (n=1), and Crohn's disease (n=1). Infectious causes included tuberculosis (n=1) and herpetic infection (n=1), while 3 cases remained idiopathic. Initial NSAID therapy achieved complete remission in 7 patients. Six patients required treatment escalation beyond NSAIDs. Favorable outcomes were achieved with etiology-specific therapy, including antituberculous treatment combined with corticosteroids for tuberculous scleritis, methotrexate and corticosteroids for sarcoidosis-associated necrotizing scleritis, corticosteroids for Sjögren's syndrome- and Crohn's disease-associated nodular scleritis, and azathioprine with corticosteroids for bilateral Behçet's-related scleritis. A patient with granulomatosis with polyangiitis-associated nodular scleritis was refractory to NSAIDs and corticosteroids but improved following cyclophosphamide (Endoxan) therapy.

Conclusion: Scleritis has a broad etiological spectrum. While most cases respond to NSAIDs, refractory forms may require targeted immunosuppressive treatment. Early etiological workup and multidisciplinary care are crucial for optimal outcomes.

P-107: SILENT RETINAL CHANGES IN PEDIATRIC EPILEPSY: AN OCT STUDY OF RNFL AND GANGLION CELL COMPLEX

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Introduction: Epilepsy in children may be associated with subclinical retinal alterations that remain undetected on routine ophthalmologic examination. Optical coherence tomography (OCT) offers a non-invasive means of detecting such structural changes, potentially reflecting underlying neurodegenerative processes.

Methods: This monocentric, comparative, descriptive study included 24 children divided into two groups: 12 with epilepsy and 12 healthy controls. All participants underwent a complete ophthalmologic examination and OCT imaging, including peripapillary RNFL thickness in the four quadrants, CMT, and GCC parameters (ganglion cell layer and inner plexiform layer). Clinical data on epilepsy type, disease course, and antiepileptic treatment were also collected.

Results: The mean age was 11.50 ± 2.19 years (sex ratio: 1.18). Generalized tonic-clonic seizures were the predominant type (83.3%), with a mean disease duration of 3.00 ± 1.13 years. Valproate was the most commonly prescribed antiepileptic drug (83.3%). Superior RNFL thickness was significantly reduced in epileptic children compared with controls ($117.25 \pm 3.55 \mu\text{m}$ vs. $124.67 \pm 4.94 \mu\text{m}$; $p < 0.001$), while the remaining quadrants showed no significant difference. CMT was also significantly decreased in the epilepsy group ($241.92 \pm 45.48 \mu\text{m}$ vs. $286.42 \pm 14.43 \mu\text{m}$; $p < 0.001$). No significant differences were observed for GCC, GCL, or IPL parameters.

Conclusion: OCT reveals subclinical retinal changes in children with epilepsy, predominantly involving superior RNFL thinning and reduced macular thickness, supporting the relevance of tomographic monitoring in this population.

P-108: BEYOND THE OCULAR DEVIATION: EPIDEMIOLOGY AND RISK FACTORS OF CHILDHOOD STRABISMUS IN MAHDIA

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Introduction: Strabismus is a multifactorial ocular disorder resulting from the interplay of motor and sensory dysfunction. Beyond its cosmetic and functional impact, it may constitute the first clinical clue to an underlying organic condition, making early recognition of associated risk factors a critical component of pediatric ophthalmologic care.

Methods: A cross-sectional epidemiological survey was conducted at the Department of Ophthalmology, enrolling all children under 15 years of age presenting for ophthalmologic evaluation.

Results: Among 4,036 children screened, manifest strabismus was identified in 99 cases, yielding a prevalence of 2.2%. The mean age at diagnosis was 4.3 ± 1.57 years, while the mean age at onset was 2.1 ± 1.2 years (range: neonatal period to 12 years), with a male-to-female ratio of 0.6. Notable antecedents included a neurological history in 11 children, a family history of strabismus in 24, a family history of congenital cataract in 2, and consanguinity in 19. Refractive errors were identified in 86 children, hyperopia being the predominant finding ($n=55$). Esotropia was the most frequent pattern ($n=67$), followed by exotropia ($n=21$) and vertical deviations ($n=11$). Underlying organic pathology was detected in a subset of patients, including

unilateral cataract ($n=3$), persistent fetal vasculature ($n=1$), and unilateral papilledema revealing an optic nerve glioma ($n=1$). Strabismus was significantly associated with a family history of strabismus ($p=0.025$), personal neurological antecedents ($p=0.009$), hyperopic refractive error ($p=0.012$), and unilateral organic ocular disease ($p=0.001$).

Conclusion: These findings underscore the importance of systematically screening for familial and clinical risk factors in children with strabismus, enabling targeted surveillance of high-risk populations and timely prevention of amblyopia.

P-109: CHATGPT AND OPHTHALMOLOGY: ACCURACY AND RELIABILITY

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Introduction: Artificial intelligence (AI) models such as ChatGPT are increasingly used to provide medical information, including in ophthalmology. However, concerns remain regarding the accuracy of their responses, the reliability of scientific references, and their ability to detect misleading or pseudo-logical reasoning. This study evaluated the accuracy and self-correction ability of ChatGPT-4 when confronted with ophthalmology-related questions involving pseudo-logical fallacies.

Our aim is to assess the accuracy and reliability of ChatGPT-4 responses to ophthalmology-related questions involving pseudo-logical reasoning and evaluate its ability to identify and correct its own errors.

Methods: ChatGPT-4 was asked to answer three ophthalmology-related questions designed around pseudo-logical fallacies, with prompts emphasizing the accuracy and reliability of scientific references. The questions covered anterior segment disorders, genetic diseases, and retinal diseases. When errors were identified, they were explicitly pointed out to assess the model's ability to self-correct.

Results: ChatGPT-4 provided incorrect responses in all three cases. Two main types of errors were identified: fabricated scientific references in two cases, including authors, article titles, and purported Results; and inaccurate citation of genuine publications in one case, with altered citation details and incorrect interpretation of study findings. None of the fabricated articles could be identified through searches using the reported bibliographic information. After the errors were highlighted, ChatGPT-4 successfully self-corrected in all three cases and acknowledged the inaccuracies.

Conclusion: ChatGPT-4 demonstrated important limitations when confronted with pseudo-logical reasoning, including incorrect medical Conclusions and unreliable scientific references. However, its ability to recognize and correct errors when explicitly challenged suggests a potential for interactive error correction. These findings emphasize the need for critical evaluation and independent verification of AI-generated medical information and scientific references, particularly in clinical and academic settings.

P-110: ARTIFICIAL INTELLIGENCE VS. HUMAN: CHATGPT-4 IN AMD PATIENT EDUCATION

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Introduction: Age-related macular degeneration (AMD) is a major cause of vision loss in individuals over 50 years of age. Patient education is essential for disease management. With the increasing use of artificial intelligence (AI) in healthcare, this study compared ChatGPT-4 with traditional medical consultation for AMD patient education. Our aim is to evaluate the accuracy, clarity, and emotional support provided by ChatGPT-4 in response to common AMD-related patient questions.

Methods: ChatGPT-4 was asked three questions: What should I know about AMD? Is there a curative therapy for AMD? I feel sad as an AMD patient. Its responses were assessed for medical accuracy, clarity, completeness, and emotional support and compared with information typically provided during medical consultation.

Results: ChatGPT-4 provided a clear but relatively superficial explanation of AMD, accurately describing its dry and neovascular forms, symptoms, risk factors, management options, and strategies to improve quality of life, including low-vision aids and Amsler grid monitoring. When questioned about retinal transplantation, it provided misleading information and cited nonexistent studies; it subsequently acknowledged and corrected the error when challenged. Regarding emotional distress, ChatGPT-4 responded empathetically and suggested support groups, adaptive activities, and professional psychological support when appropriate.

Conclusion: ChatGPT-4 can provide accessible, structured, and empathetic information for AMD patients. However, its limited medical depth and potential for misinformation, particularly regarding emerging therapies and scientific references, highlight the need for professional oversight and verification of AI-generated medical information.

P-111: ARTIFICIAL INTELLIGENCE IN HEAD-TO-HEAD COMPARISON: CHATGPT VERSUS PERPLEXITY

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Introduction: Artificial intelligence (AI) is increasingly transforming scientific work, from task automation to information retrieval and content generation. This study compared ChatGPT and Perplexity to assess their respective strengths and limitations in error detection, scientific idea generation, and literature searching. Our aim is to compare the performance of ChatGPT and Perplexity across three key tasks related to scientific writing and research.

Methods: A systematic comparison of ChatGPT and Perplexity was conducted in three domains: detection of grammatical, spelling, and stylistic errors in a scientific text; generation of relevant and innovative ideas for scientific work; and retrieval of relevant and verifiable scientific references.

Results: Perplexity correctly identified 87% of grammatical and spelling errors, compared with 76% for ChatGPT, whereas ChatGPT performed better in detecting stylistic inconsistencies (82% vs. 71%). For scientific idea generation, Perplexity produced 32 relevant and structured suggestions compared with 27 for ChatGPT, while ChatGPT generated a greater overall number of ideas (45 vs. 38). Regarding bibliographic retrieval,

Perplexity provided 92% relevant and verifiable references, compared with 68% for ChatGPT. Inaccurate or unverifiable references occurred in 32% of ChatGPT outputs versus 8% for Perplexity.

Conclusion: ChatGPT and Perplexity demonstrated complementary strengths. ChatGPT performed better in stylistic formulation and overall idea generation, whereas Perplexity showed greater accuracy in error detection, structuring scientific ideas, and retrieving reliable bibliographic references. Their complementary use may therefore improve efficiency and quality in scientific writing and research.

P-112: THERAPEUTIC ADHERENCE IN OPEN-ANGLE GLAUCOMA: A CROSS-SECTIONAL ASSESSMENT

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Introduction: Open-angle glaucoma (OAG) is a leading cause of irreversible blindness worldwide, and its management relies almost entirely on long-term, often lifelong, medical therapy to control intraocular pressure. Non-adherence to this therapy remains a major, often underrecognized, contributor to disease progression, yet the behavioral and knowledge-related determinants of adherence remain insufficiently characterized, particularly in low-resource settings. The aim of this study was to assess patients' knowledge of OAG and the burden of medical treatment, to quantify the rate of therapeutic adherence (TA), and to identify factors independently associated with adherence.

Methods: We conducted a cross-sectional descriptive study in the Department of Ophthalmology at Tahar Sfar University Hospital, Mahdia, Tunisia, between January and June 2025. A total of 170 patients with OAG under active medical treatment were consecutively recruited during routine consultations. Data were collected through a structured, validated questionnaire covering five domains: sociodemographic characteristics, disease profile, disease-specific knowledge, therapeutic adherence and its barriers, and treatment satisfaction. Interviews were conducted after informed consent and corroborated by medical record review.

Results: The mean patient age was 66.9 ± 12.1 years, with a male-to-female ratio of 0.61. Most patients had a low educational level (52.9% illiterate) and low socioeconomic status (63.5%). Mean treatment duration was 4.7 ± 4.1 years, and 42.4% of patients were on dual therapy, most commonly a prostaglandin analogue combined with a beta-blocker. Disease-specific knowledge was incomplete: while 82.4% of patients knew treatment was lifelong, only 58.8% recognized the chronic nature of the disease and just 54.1% understood its potential to cause irreversible blindness if untreated. Overall adherence was rated good in 60.6% of patients, though estimates varied substantially (74.7%–91.8%) depending on the assessment method applied. On univariable analysis, adherence was significantly associated with health insurance coverage ($p < 0.001$), educational level ($p = 0.045$), use of fixed-dose combination therapy ($p < 0.001$), knowledge of the disease definition ($p = 0.002$), awareness of its functional consequences ($p = 0.001$), knowledge of the need for lifelong treatment ($p < 0.001$), knowledge of the need for regular dosing ($p < 0.001$), awareness of the hereditary nature of glaucoma ($p = 0.018$), and treatment satisfaction ($p < 0.001$).

On multiple linear regression, lack of awareness regarding dosing schedule requirements emerged as the only factor independently associated with adherence ($p < 0.001$; $\beta = 0.683$; 95% CI: 0.714–1.845).

Conclusion: Therapeutic adherence in glaucoma is a dynamic behavior shaped largely by patients' understanding of their treatment regimen. In this cohort, lack of awareness about dosing schedules was the strongest independent predictor of poor adherence, underscoring the central role of patient education (particularly regarding treatment timing) alongside regimen simplification (e.g., fixed-dose combinations) and a proactive, communication-based approach by clinicians to reduce preventable vision loss from glaucoma in low-resource settings.

P-113: TREATING NON-INFECTIOUS UVEITIS: IMMUNOMODULATORY THERAPY OUTCOMES IN A TUNISIAN COHORT

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Introduction: Non-infectious uveitis (NIU) is a major cause of preventable visual impairment, and corticosteroids alone are often insufficient to achieve durable control of inflammation without significant long-term toxicity. Immunosuppressive and immunomodulatory (IS/IM) therapy has therefore become central to the management of severe or corticosteroid-dependent NIU, yet data on its use in North African/Tunisian populations remain limited. The aim of this study was to describe the indications, therapeutic effect on visual acuity and intraocular inflammation, and tolerance of IS/IM therapy in NIU at a Tunisian tertiary referral center.

Methods: This retrospective study included 71 patients (131 eyes) with active NIU treated with one or more IS/IM agents between January 2011 and July 2025. Severity was assessed by initial visual acuity, grade of intraocular inflammation, and post-uveitic complications. Therapeutic effect was evaluated on final visual acuity, control of intraocular inflammation, relapse rate, and corticosteroid-sparing effect. Tolerance was assessed clinically and biologically. The chi-square test was used for comparisons, with $p \leq 0.05$ considered significant.

Results: Mean age was 31.7 ± 13.6 years, with a male predominance (64.8%; sex ratio 1.9, $p = 0.0006$). Behçet disease (62.0%) and Vogt-Koyanagi-Harada disease (22.5%) were the leading etiologies. IS/IM therapy was indicated primarily by the underlying etiology (50.7%) and disease severity (42.2%), and was used first-line in 50.7% of patients. Azathioprine was the most frequently used agent (85.9%), followed by cyclosporine A (33.8%). At a mean follow-up of 36.7 months, visual acuity improved in 50% of eyes at 12 months; intraocular inflammation was inactive in 72.1% of eyes at 12 months, with complete remission allowing treatment cessation in 27.5% of eyes. A corticosteroid-sparing effect (maintenance dose ≤ 10 mg/day) was achieved in 85.9% of patients. Relapses occurred in 32.1% of eyes. Side effects occurred in 7% of patients, leading to treatment discontinuation in 5.6%.

Conclusion: IS/IM therapy is effective in controlling inflammation and improving visual outcome in NIU, with an acceptable tolerance profile, supporting early, adequately dosed, and sufficiently prolonged treatment guided by etiology and severity rather than corticosteroids alone.

OTO-RHINO-LARYNGOLOGIE

P-114: DIAGNOSTIC PERFORMANCE OF FINE-NEEDLE ASPIRATION CYTOLOGY IN THE EVALUATION OF PAROTID TUMORS

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Introduction: Parotid tumors comprise a heterogeneous group of benign and malignant neoplasms. Accurate preoperative characterization is essential for surgical planning. Fine-needle aspiration cytology (FNAC) is a minimally invasive diagnostic tool, although its performance varies across studies. This study aimed to evaluate FNAC diagnostic performance by correlating cytological and histopathological findings.

Methods: We conducted a retrospective study including 112 patients who underwent parotidectomy and preoperative parotid fine-needle aspiration between January 2012 and December 2025 in the Department of Otolaryngology and Head and Neck Surgery at Charles Nicolle University Hospital, Tunis.

Results: The mean age was 46 years, with a slight male predominance (50.9%; male-to-female ratio, 1.03). Preoperative parotid MRI was performed in 104 patients (95.6%). FNAC suggested a benign tumor in 90 cases (80.4%), a malignant tumor in 5 (4.5%), and yielded indeterminate Results in 17 (15.2%). Histopathology identified 102 benign and 10 malignant tumors. Pleomorphic adenoma ($n=58$) and Warthin tumor ($n=34$) were the most frequent benign lesions. The most common malignant tumors were mucoepidermoid carcinoma, acinic cell carcinoma, and salivary duct carcinoma ($n=2$ each). Cytological and histopathological findings were concordant in 92 cases, with two false-negative and one false-positive Results. FNAC showed a sensitivity of 66.7%, specificity of 98.9%, positive predictive value of 80%, and negative predictive value of 97.8%.

Conclusion: FNAC provides high specificity and a high negative predictive value in parotid tumor assessment. However, its limited sensitivity and the occurrence of indeterminate and false-negative Results highlight the need for careful interpretation alongside clinical and radiological findings.

P-115: SALIVARY GLAND TUMORS IN CHILDREN

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Introduction: Salivary gland tumors are rare in children and present a heterogeneous group of lesions. Preoperative diagnostic assessment relies mainly on MRI and fine-needle aspiration cytology, while definitive diagnosis remains histological.

Methods: We conducted a retrospective descriptive study including 14 patients younger than 18 years diagnosed with salivary gland tumors between 2021 and 2025 at the ENT and Head and Neck Surgery Department, Charles Nicolle Hospital, Tunis.

Results: The mean age was 14 years, with a marked female predominance (71%; male-to-female ratio, 0.4). Chronic parotid or submandibular swelling was the main presenting symptom (86%). Tumors were located in the parotid gland in 57% of cases, the submandibular gland in 36%, and an accessory

salivary gland in 7%. Facial nerve palsy was observed in one patient. MRI was performed in 12 patients (86%) and suggested pleomorphic adenoma in four cases, Warthin tumor in one, a suspicious salivary gland tumor in one, and a cystic lesion in three. Mean tumor size was 27 mm. FNAC was performed in 11 patients (79%); Milan categories were I (n=1), II (n=2), IVA (n=6), and IVB (n=1), with lymphoma suspected in one case. Surgical management included parotidectomy (n=7) and submandibulectomy (n=5). Postoperative complications included marginal mandibular branch paresis (n=2) and submandibular hematoma (n=1). Two pleomorphic adenoma recurrences occurred during follow-up.

Conclusion: Pediatric salivary gland tumors are rare and heterogeneous. MRI and FNAC contribute to preoperative assessment, while histopathology confirms the diagnosis. Treatment should be individualized, with particular attention to facial nerve preservation.

P-116: IMPACT OF AGE AND SEX ON DISEASE-FREE SURVIVAL IN DIFFERENTIATED THYROID CARCINOMA: A RETROSPECTIVE

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Introduction: Age and sex are recognized prognostic factors in differentiated thyroid carcinoma (DTC), although their independent influence on recurrence remains incompletely understood. The aim of this study was to assess the impact of age at diagnosis and sex on disease-free survival (DFS) and recurrence risk in patients with DTC.

Methods: We conducted a 10-year retrospective analytical study (2010–2019) including 133 patients who underwent surgery for DTC at the Department of Otorhinolaryngology–Head and Neck Surgery, Farhat Hached University Hospital, Sousse. Histopathological specimens were systematically reviewed and reclassified according to the 2022 WHO classification. Survival and multivariable analyses were performed using Kaplan–Meier **Methods** and logistic regression.

Results: Mean age at diagnosis was 47 years, with a marked female predominance (male-to-female ratio, 0.23). On univariate analysis, age ≤55 years and female sex were significantly associated with better DFS ($p=0.011$ and $p=0.019$, respectively). In multivariable analysis, female sex remained independently associated with a lower recurrence risk ($OR=0.292$; 95% CI, 0.100–0.853; $p=0.045$). Conversely, despite the univariate findings, age >55 years was associated with a lower risk of recurrence after adjustment ($OR=0.282$; 95% CI, 0.102–0.782; $p=0.024$).

Conclusion: Female sex was independently associated with a favorable outcome in DTC. The reversal of the association between age and recurrence after multivariable adjustment suggests potential confounding or interactions with other prognostic variables and warrants cautious interpretation.

P-117: OCULO-ORBITAL COMPLICATIONS OF ACUTE SINUSITIS: A 30-PATIENT RETROSPECTIVE STUDY

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Introduction: Oculo-orbital complications are among the most serious complications of acute sinusitis and may lead to permanent visual impairment or life-threatening intracranial extension. Early recognition and appropriate management are therefore essential.

The aim was to describe the clinical presentation, radiological findings, management, and outcomes of oculo-orbital complications of acute sinusitis.

Methods: We conducted a retrospective descriptive study including 30 patients treated for oculo-orbital complications of acute sinusitis at the ENT and Head and Neck Surgery Department, Farhat Hached University Hospital, Sousse. Clinical, radiological, therapeutic, and outcome data were analyzed.

Results: Mean age was 17 years. Palpebral edema was present in all patients and exophthalmos in 28 (93.3%). Ocular motility impairment occurred in 10 patients, decreased visual acuity and keratitis in two patients each, and abducens nerve palsy in one. Fundoscopic examination was normal in all patients. According to the Chandler classification, 4 patients (13.3%) had preseptal cellulitis, 8 (26.7%) orbital cellulitis, 9 (30.0%) subperiosteal abscess, 7 (23.3%) orbital abscess, and 2 (6.7%) cavernous sinus thrombosis. Contrast-enhanced computed tomography was performed in all patients. All received systemic antibiotics, while anticoagulation was administered for cavernous sinus thrombosis. Surgical orbital drainage was required in 21 patients (70%). Outcomes were generally favorable; however, two patients developed persistent optic neuropathy.

Conclusion: Oculo-orbital complications of acute sinusitis may result in severe visual morbidity. Ocular motility impairment and decreased visual acuity are important warning signs of postseptal involvement. Early imaging and prompt medical-surgical management are crucial to prevent permanent sequelae.

P-118: CONVERSION TO GENERAL ANESTHESIA DURING MINIMALLY INVASIVE PARATHYROIDECTOMY

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Introduction: Minimally invasive parathyroidectomy (MIP) under local anesthesia (LA) is a reference technique for single parathyroid adenoma. However, difficulties in gland localization may require conversion to general anesthesia (GA).

Methods: We conducted a retrospective analysis of a series of patients operated by MIP under LA, focusing on cases requiring intraoperative conversion to GA between 2020 and 2025.

Results: Conversion to GA was required in 2 of 15 patients (13.3%). Preoperative imaging (ultrasound and/or scintigraphy) was concordant with a single localized adenoma in both cases. In the first case, exploration under LA allowed excision of a parathyroid-like nodule, but frozen-section analysis revealed thyroid parenchyma, corresponding to an ectopic thyroid nodule; conversion to GA through the same approach enabled excision of the true parathyroid adenoma, confirmed by a second frozen-section examination. In the second case, targeted exploration under LA failed to localize the adenoma, requiring conversion to GA with extension to a conventional cervicotomy to identify and resect the gland. In both cases, outcome was favorable, with normalization of biological parameters. Failure was mainly related to difficulties of deep dissection in an awake patient, either due to misleading anatomical findings or inability to localize the gland.

Conclusion: Failure of MIP under LA is primarily linked to the

constraints of deep dissection in a conscious patient. Conversion to GA, whether through the initial approach or a conventional cervicotomy, remains the key to successful surgical salvage.

P-119: ANTROCHOANAL POLYP: PREDICTIVE FACTORS FOR POSTOPERATIVE RECURRENCE

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Introduction: Antrochoanal polyp is a benign pseudo-tumor of the maxillary sinus, often unilateral and more common in young adults and children. The recurrence of this pathology remains a common issue that can occur even after complete surgical excision. Several factors can promote that.

Methods: A retrospective descriptive study conducted on patients who underwent surgery for antrochoanal polyp during the period from January 2006 to December 2021.

Results: In total, 125 patients were included. Among them, 28% had at least one postoperative recurrence. Twenty-six patients recurred once, five twice, and four three times. The average age of the population was 26.85 years. The most common functional symptoms were nasal obstruction, rhinorrhea, and epistaxis. A statistically significant association was observed between recurrence and age <26.5 years ($p=0.019$) as well as chronic rhinosinusitis ($p=0.001$). A statistically significant association was also observed between the Recurrence group and anatomical variants on the same side of the polyp such as deviation of the nasal septum ($p=0.031$) and concha bullosa of the middle turbinate ($p=0.032$). A Mean Platelet Volume >10.05 was a factor promoting recurrence ($p<0.001$).

Conclusion: Optimizing the management of antrochoanal polyp requires special attention for children and young adults with a close monitoring rhythm and simultaneous treatment of associated naso-sinus pathologies to reduce the risk of recurrence.

P-120: ACUTE MASTOIDITIS IN CHILDREN: A FREQUENT COMPLICATION OF OTITIS MEDIA REQUIRING EARLY RECOGNITION

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Introduction: Acute mastoiditis (AM) is the most frequent complication of acute otitis media (AOM) in children and can be functionally and vitally threatening if not managed promptly. The main purpose of this study is to describe the clinical, radiological, therapeutic and outcome features of pediatric AM and to identify associated risk factors.

Methods: We retrospectively reviewed 14 children treated for acute mastoiditis at the ENT Department of the Military Hospital of Tunis over an 8-year period (2012–2020). Epidemiological, clinical, radiological, bacteriological, therapeutic and outcome data were collected and analyzed.

Results: The cohort included 9 boys and 5 girls (sex ratio 1.8), mean age 2.6 years (range 6 months–18 years). Mean consultation delay was 6 days, reaching 3 weeks in some cases; self-medication was used in 6 cases. All patients presented retro-auricular swelling, fever and otalgia; one case had peripheral facial palsy. CT scan, performed systematically, confirmed the diagnosis in all cases, with bone lysis in 57% and subperiosteal

abscess in 50%. *Streptococcus pneumoniae* was the main organism isolated. All children received intravenous antibiotics; surgical drainage or mastoidectomy was required in 3 cases. Associated personal factors included young age (65%), male sex (65%), iron-deficiency anemia (21%), recurrent rhinopharyngitis with hearing impact (21%), adenoid hypertrophy (21%), allergic rhinitis (14%) and gastroesophageal reflux (14%). Environmental factors included air pollution (93%), passive smoking (71%) and daycare attendance (35%).

Conclusion: Young age, collective living and passive smoking were the most frequent associated factors, consistent with the literature. Early recognition and prompt antibiotic therapy of AOM are key to reducing the risk of AM in children.

PÉDIATRIE

P-121: THE GROWING ROLE OF BIOLOGIC THERAPIES IN CHILDREN: INDICATIONS, OUTCOMES, AND FUTURE PERSPECTIVE

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Introduction: Biologic therapies have revolutionized the management of several pediatric inflammatory, autoimmune, and allergic diseases through targeted modulation of key inflammatory pathways. Their use has expanded considerably across pediatric specialties over the past decade.

Objective: To report a series of pediatric cases treated with biologic agents and to analyze their indications, therapeutic outcomes, and associated adverse events.

Methods: We conducted a retrospective descriptive single-center study in the Department of Pediatrics at Farhat Hached University Hospital, Sousse. All patients who received biologic therapy during the last five years were included.

Results: A total of nine patients, aged between 3 and 12 years, were identified. The underlying conditions included four cases of treatment-refractory inflammatory bowel disease (ulcerative colitis and Crohn's disease), two cases of severe systemic juvenile idiopathic arthritis, two cases of primary immunodeficiency disorders (one patient with IL-12p40 deficiency complicated by disseminated *Bacillus Calmette-Guérin* infection and one patient with hyper-IgD syndrome), and one case of severe chronic immune thrombocytopenia.

The biologic agents prescribed were infliximab, tocilizumab, rituximab, etanercept, and anakinra. Clinical outcomes were favorable in all patients, with particularly remarkable responses observed in those with inflammatory bowel disease and systemic juvenile idiopathic arthritis. No treatment-related adverse events were reported during the follow-up period.

Conclusion: Biologic therapy represents an innovative therapeutic option capable of significantly modifying the disease course of several severe chronic pediatric disorders. Its ongoing development is paving the way toward increasingly personalized, effective, and less toxic therapeutic strategies in pediatric medicine.

P-122: HYPOXIC-ISCHEMIC ENCEPHALOPATHY: SITUATION IN TUNISIA, 2020

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Introduction: Perinatal asphyxia (PA), caused by impaired materno-fetal gas exchange, leads to metabolic acidosis and potential neurological damage. In Tunisia, inadequate prenatal care and the absence of therapeutic hypothermia exacerbate this public health issue. This study aimed to assess PA prevalence, etiological factors, and neonatal outcomes based on hypoxic-ischemic encephalopathy (HIE) stages.

Methods: A retrospective, multicenter study (January–December 2020) included 183 term newborns admitted for PA in six Tunisian university hospitals. Diagnosis was based on a sentinel event, Apgar score <7 at 5 minutes, and neurological signs. Maternal, obstetric, and neonatal data were collected from medical records. HIE was classified using the Sarnat scale. Bivariate and multivariate analyses identified mortality risk factors.

Results: PA prevalence was 5.6‰ of live births (183/32521). Obstetric causes predominated (59%, including umbilical cord anomalies: 21%, placental issues: 10%), followed by fetal causes (14%); 26% were idiopathic. HIE was staged as I (60.1%), II (26.2%), and III (13.7%). Convulsions occurred in 25.1% of cases, with 43.5% developing status epilepticus. Multiorgan failure affected 11.5%, and 56.3% required ventilatory support for respiratory distress. Mortality was 14.8% (27/183), mainly linked to stage III HIE. Bivariate analysis associated mortality with cesarean delivery ($p=0.032$), Apgar <3 at 1 minute ($p=0.002$), <7 at 5 and 10 minutes ($p=0.002$ and $p=0.001$), multiorgan failure ($p=0.019$), and Sarnat stage ($p<0.001$). Multivariate analysis identified Sarnat stage as the only independent mortality factor (OR stage III/I: 19.8)

Conclusion: This multicenter study estimated the prevalence of PA in Tunisia at 5.6‰ and identified predominantly obstetric causes. The severity of hypoxic-ischemic encephalopathy, classified using the Sarnat staging, was the main independent factor associated with neonatal mortality.

P-123: IMPACT OF PROLONGED CHILD HOSPITALIZATION ON FAMILY DYNAMICS: AN EXPLORATORY STUDY

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Introduction: Prolonged hospitalization may disrupt the child's emotional well-being and daily routines, while also placing a considerable burden on parents and siblings. Understanding its psychological and social consequences is essential to identify vulnerable families and provide appropriate support during hospitalization. The objective was to identify factors associated with the impact of prolonged hospitalization on the well-being of hospitalized children and family dynamics.

Methods: A descriptive cross-sectional knowledge, attitudes and practices study was conducted using a hetero-administered questionnaire among parents of children hospitalized in the Pediatric Medicine A and D departments of Béchir Hamza Children's Hospital in Tunis.

Results: A descriptive cross-sectional KAP study was conducted using a hetero-administered questionnaire among parents of children hospitalized in the Pediatric Medicine A and D departments of Béchir Hamza Children's Hospital in Tunis.

Results: Eighty-four parents participated, 95% of whom were mothers, yielding a 95% response rate. The mean hospital stay was 16 ± 19.4 days. Only 35% of children were considered emotionally balanced. The most frequent manifestations were sadness (32%) and aggression (25%), while regression occurred in 14% of cases. Sleep disturbances (60%), appetite disturbances (70%), and increased dependence on the accompanying parent (73%) were reported. The mean parental stress level was 6.9/10. Although 82% perceived support from their relatives, unmet needs remained, particularly emotional (80%) and financial (73%). The parent-child relationship was strengthened in most cases (76%), whereas the marital relationship was affected in 54%. Sibling relationships were affected in 35% of cases. Child age, hospitalization duration and recurrence, and reason for hospitalization were significantly associated with psychological impact. In multivariate analysis, sex, reason for hospitalization, and older age were independently associated with psychological repercussions. Sibling emotional distress was associated with time devoted to them, family support, and number of children. Child sadness and lack of family support were independently associated with higher parental stress.

Conclusion: Prolonged hospitalization significantly affects family dynamics. Comprehensive care including psychological support, improved communication with healthcare professionals, and attention to parents' and siblings' needs is essential.

P-124: RRESPIRATORY OUTCOMES IN CHILDREN WITH ESOPHAGEAL ATRESIA

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Introduction: Esophageal atresia is a congenital malformation associated with multiple gastrointestinal and respiratory complications. Patients with esophageal atresia have higher rates of persistent bacterial bronchitis, recurrent lower respiratory tract infections, pneumonia, and asthma compared with the general population. We aimed to assess the short-, medium-, and long-term respiratory outcomes in children who underwent surgery for esophageal atresia in the neonatal period.

Methods: This was a retrospective, descriptive, monocentric study conducted in the Pediatric Department B of Béchir Hamza Children's Hospital in Tunis over an 18-year period (January 2005–December 2023). It included children who underwent neonatal surgery for esophageal atresia (EA) and developed respiratory manifestations, with a minimum follow-up of 12 months. Neonatal deaths, patients without respiratory manifestations, those with follow-up <12 months, and patients lost to follow-up were excluded.

Results: During the study period, 21 patients underwent neonatal surgery for esophageal atresia (EA), of whom 12 were included. The mean age was 2.61 ± 1.96 years, with 8 boys and 4 girls. Type III EA was the only anatomical type observed. All patients underwent primary end-to-end esophageal anastomosis with closure of the distal tracheoesophageal fistula. During follow-up, recurrent bronchopulmonary infections were reported in 7 patients, chronic cough in 3, and stridor in 2 patients. On examination, wheezing was found in 8 patients, stridor in 7, and tachypnea in 4. Three patients

had severe lower respiratory tract infections (LRTI) within the first postoperative month. Upper airway abnormalities were frequent, including laryngotracheomalacia in 10 patients. In the medium term, respiratory infections predominated: 6 patients developed LRTIs, 2 had recurrent bronchopulmonary infections, and 4 recurrent wheezing. In the long term, asthma was the most frequent respiratory complication, affecting 11 patients, followed by chronic cough (9), LRTIs (7), recurrent bronchopulmonary infections (5), upper respiratory tract infections (3), and bronchiectasis (2). Among asthmatic patients, 5 experienced acute exacerbations. Six maintained treatment with respiratory improvement. Overall, respiratory symptoms resolved in 6 patients, and 2 of the 3 patients who reached adolescence showed notable respiratory improvement. Maintenance treatment was discontinued in 6 patients after 27.5 months (7–192)

Conclusion: Respiratory complications are frequent after esophageal atresia repair, with asthma and recurrent respiratory infections being the main long-term outcomes. Long-term multidisciplinary respiratory follow-up is therefore essential.

P-125: PEDIATRIC PAIN MANAGEMENT IN TUNISIA: HEALTHCARE PROFESSIONALS PRACTICES AND PARENTS PERCEPTIONS

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Introduction: Pain in hospitalized children is a major public health concern and an important indicator of quality of care. Despite current recommendations, pediatric pain management remains suboptimal in many hospital settings.

Aim: To assess healthcare professionals' knowledge and practices regarding pediatric pain management, identify associated factors, and describe parents' perceptions of pain-related care.

Methods: We conducted a descriptive cross-sectional analytical study at Bechir Hamza Children's Hospital in Tunis, including 60 healthcare professionals and 60 parents of hospitalized children. Data were collected using the Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain (PNKAS) and a parent-specific questionnaire.

Results: Healthcare professionals had a mean age of 34.7 ± 10.1 years. Their mean knowledge score was 14.7 ± 3.9 out of 36, with 78% demonstrating insufficient knowledge. Major gaps concerned the role of morphine in moderate-to-severe pain (49%). The main reported barriers were lack of continuing education (87%), absence of pain-assessment tools (70%), and heavy workload (63%). Among parents, 47% reported that pain was assessed only occasionally and 5% reported no assessment. Communication and listening deficiencies were reported by 82%. In multivariable analysis, the absence of written protocols ($OR=10.53$; $p<0.001$) and the unavailability of appropriate analgesics ($OR=8.82$; $p=0.001$) were independently associated with poor knowledge.

Conclusion: Substantial gaps persist in healthcare professionals knowledge and pediatric pain-management practices. Continuing education, standardized protocols, validated assessment tools, and improved communication with parents are needed.

P-126: JUVENILE SYSTEMIC LUPUS ERYTHEMATOSUS DISCOVERY CIRCUMSTANCES: A CROSS-SECTIONAL

STUDY IN SOUSSE

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Introduction: The occurrence of systemic lupus erythematosus (SLE) in children aged less than 18 years is called juvenile systemic lupus erythematosus(JSLE). It'sis a rare disease accounting for 10 to 20% of SLE cases. Diagnosis can be difficult due to the disease heterogeneous manifestations which can be confounding with other more frequent pathologies. Our aim is to describe the diverse discovery circumstances of JSLE in Tunisian patients.

Methods: We conducted a retrospective cross-sectional study in the pediatric departments of Sahloul and Farhat Hached hospitals. We included all patients with an established JSLE diagnosis followed-up in the two departments. All the complete records were analyzed over a period of 14 years, from January 1, 2010 to December 31, 2024. The study lasted from November 2025 to February 2026.

Results: 32 JSLE patients were collected. 24 of them were females. A family history of autoimmune diseases was noted in 8 cases including 5 cases of SLE. The mean age at the disease onset was 9.5 ± 3.4 years. And the mean age at the disease diagnosis was 9.9 ± 3.8 years. Five of the patients were under 5 years. The diagnosis delay varied from 1 to 12 months.

Fever was the prevalent symptom at the onset ($n=11$, 34.4%), followed by generalized edema ($n=9$, 28.1%). Only 4 patients (12.5%) presented with polyarthralgia and 1 case with annular rash. Neurologic symptoms announced the disease in one case. Further clinical examination revealed cutaneous manifestations in 18 patients (56.3%), hypertension in ten patients (31.2%) and seven patients complained of chest pain.

All the patients fulfilled the EULAR/ACR 2019 criteria and were treated with conventional drugs according to severity of the manifestations especially lupus nephritis ($n=25$, 78.1%) and neurologic involvement ($n=3$, 9.3%).

Conclusion: JSLE as for SLE initial symptoms can mislead the diagnosis resulting in delays in diagnosis and adequate treatment. General signs including fever are the most frequent inaugural features. Renal manifestations, with prevalent proliferative forms, usually occur in the first year of the disease course. Awareness for this disease should be raised for more rapid and accurate diagnosis and management.

P-127: RENAL INVOLVEMENT IN JUVENILE SYSTEMIC LUPUS ERYTHEMATOSUS: A CROSS-SECTIONAL STUDY IN SOUSSE

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Introduction: Juvenile systemic lupus erythematosus (JSLE) is a rare disease with heterogeneous clinical and biological features. General signs along with cutaneous and articular manifestations are frequent. JSLE is characterized by more frequently aggressive forms compared to adult-onset systemic lupus erythematosus.

Our aim is to describe the epidemiological and clinic-biological characteristics of renal involvement among JSLE patients.

Methods: We conducted a retrospective cross-sectional study in the pediatric departments of Sahloul and Farhat Hached hospitals from November 2025 to February 2026 including all patients with an established JSLE diagnosis followed-up in the two departments from January 1, 2010 to December 31, 2024 with complete records.

Results: We collected 32 JSLE patients with 75% of females. The mean age at the study inclusion was 10.56 ± 3.7 years. The mean age at the disease diagnosis was 9.9 ± 3.8 years. Edema was the second most frequent symptom at the onset of the disease ($n=9$, 28.1%). Ten patients presented with hypertension (31.2%). 9 patients (28%) had from acute kidney failure. Positive proteinuria was present in 22 cases (68.8%) with a nephrotic syndrome found in 13 of them (40.6%). It was impure in all these cases. C4 complement was consumed in all the cases with positive antinuclear antibodies. 25 patients had undergone kidney biopsy revealing a predominant proliferative class IV (52%). These patients had a high activity according to the SLEDAI-2K score. Class III lupus nephritis (LN) was less frequent (28%). All patients were treated with Hydroxychloroquine and corticosteroids. Cyclophosphamide was the most frequent immunosuppressant used. Five children (15.6%) progressed to chronic kidney failure. Age, complement consumption, and positive anti-DsDNA antibodies were significantly correlated to the presence of LN.

Conclusion: Renal involvement was frequent in our study with the predominance of proliferative forms. This manifestation raises the severity of JSLE compared to adult-onset systemic lupus erythematosus. It occurs usually during the first year of the disease course indicating a close follow-up to prevent chronic kidney failure.

P-128: ACUTE MENINGITIS IN CHILDREN : CLINICAL FEATURES AND NEUROLOGICAL COMPLICATIONS

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Introduction: Despite advances in vaccination, antimicrobial therapy, and critical care, acute meningitis remains a major cause of pediatric morbidity and mortality.

The aim of our study is to characterize the clinical presentation, etiology, laboratory findings, and complications of acute pediatric meningitis.

Methods: This retrospective study included children aged >3 months hospitalized for acute meningitis between 2023 and 2026 at the Children's Hospital of Tunis (Pediatric Department B). We collected data on clinical presentation, CSF and microbiological findings, neuroimaging, treatment, and outcomes.

Results: Twenty-two children were included. The median age was 61 months (range : 3–120), with a male-to-female ratio of 1.2; children aged 4–10 years constituted the largest group. Fever was present in all cases, followed by gastrointestinal

symptoms (50%), headache (30%), and seizures (20%). CSF analysis revealed pleocytosis in all patients, elevated protein levels in 59%, and hypoglycorrhachia in 22%. Overall, 14 patients had viral meningitis, while 8 had bacterial meningitis, including 4 cases caused by *Streptococcus pneumoniae*. Neuroimaging detected abnormalities in four children, including ventriculitis, empyema, and sinus thrombosis. Seizures were the most frequent neurological complication. At discharge, one child had neurological sequelae, and no deaths were reported.

Conclusion: Acute pediatric meningitis still carries high rates of neurological morbidity and mortality. Rapid diagnosis and targeted therapy are critical to preventing long-term sequelae and saving lives.

P-129: ASSESSING MEDICAL INTERNS' KNOWLEDGE AND SKILLS IN INHALATION DEVICE USE FOR CHILDHOOD ASTHMA

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Introduction: Correct use of inhalation devices is essential for effective asthma management in children. However, inadequate knowledge and poor inhalation technique among healthcare professionals may compromise treatment efficacy. This study aimed to assess the knowledge and practices of medical interns regarding inhalation devices used in childhood asthma and to identify potential gaps in their training.

Methods: A descriptive cross-sectional study was conducted in July 2026 among medical interns from different clinical departments at Bechir Hamza Children's Hospital. A self-administered questionnaire assessed demographics, prior pulmonology exposure, inhaler device training, practical experience in demonstrating inhaler use to patients, and theoretical knowledge. It included multiple-choice and open-ended questions on pMDIs, DPIs, valved holding chambers, inhalation techniques, device maintenance, and selection according to the child's age and clinical situation. Multiple-choice questions were scored against predefined correct answers, while open-ended questions were qualitatively evaluated by expert judgment without assigning a numerical score.

Results: Forty-three medical interns completed the questionnaire, with a mean age of 25.5 ± 1.4 years. Most participants (95.3%) had previously completed a pulmonology rotation during medical school, and 90.7% reported having received specific training on inhalation devices. However, only 7.0% had previously demonstrated or explained the use of an inhalation device to a patient.

The proportion of correct responses differed according to the assessed domain, with 39.5% correctly classifying inhalation devices, 76.7% identifying DPIs, and 34.9% identifying the appropriate inspiratory maneuver for DPIs.

Knowledge of device maintenance and mouth rinsing after inhaled corticosteroid use was correct in 62.8% and 86.0% of participants, respectively.

Analysis of the open-ended questions assessing inhalation technique showed that 72.1% of participants were unable to provide an answer for pMDIs with a spacer, compared with 88.4% for Turbuhaler® and 90.7% for Diskus®. Among those providing a response, an adequate technique was demonstrated by 14.0% for pMDIs with a spacer, 2.3% for Turbuhaler®, and none for Diskus®.

Conclusion: This study highlights gaps in medical interns'

knowledge and practical skills regarding inhalation devices in childhood asthma, particularly regarding the use of the Diskus® dry powder inhaler. The limited knowledge and practical skills observed in our series highlight the need to incorporate structured, hands-on inhaler training into undergraduate and internship curricula to optimize asthma management.

P-130: PEDIATRIC CYTOPENIAS: DIAGNOSTIC CHALLENGES FROM BENIGN INFECTIONS TO LIFE-THREATENING CONDITIONS

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Introduction: Peripheral cytopenias are common hematological abnormalities in children. Their etiologies are highly heterogeneous, ranging from benign infectious causes to life-threatening hematological malignancies.

Aim: To describe the epidemiological, clinical, laboratory, and etiological spectrum of pediatric peripheral cytopenias, while evaluating their diagnostic approaches and therapeutic management.

Methods: A descriptive retrospective study including 30 patients hospitalized for pancytopenia or bicytopenia, at the Pediatric Department B of Bechir Hamza Children's Hospital of Tunis, between February 2024 and August 2026. Socio-demographic, clinical, biological (severity on complete blood count, bone marrow explorations), therapeutic, and evolutionary parameters were analyzed.

Results: The study included 30 children, with a slight male predominance (M/F sex ratio, 1.3). The mean age at diagnosis was 5.7 years (range, 1 month–14 years). The most common clinical manifestations were pallor and asthenia (43.3%), followed by hemorrhagic syndrome (36.7%). Splenomegaly and hepatomegaly were observed in 30% and 16.7% of cases, respectively. Complete blood counts revealed pancytopenia in 60% of patients (n = 18) and bicytopenia in 40% (n = 12). Infectious etiologies predominated (46.7%), mainly nonspecific viral infections (20.8%) and visceral leishmaniasis (16.6%), followed by malignant hematologic disorders and myelodysplastic syndromes (20%), autoimmune causes (13.3%), bone marrow aplasia (13.3%), and one case of vitamin B12 deficiency.

Conclusion: Bicytopenia and pancytopenia in children remain a diagnostic challenge. Although infections are the most common cause in our setting, the risk of malignancy or bone marrow failure warrants a systematic evaluation, including bone marrow examination when indicated.

P-131: MIS-C: AN ONGOING CHALLENGE IN PEDIATRIC PRACTICE

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Introduction: MIS-C is a potentially severe hyperinflammatory condition occurring after SARS-CoV-2 infection. We aimed to describe its clinical, biological, cardiovascular, therapeutic, and outcome characteristics.

Methods: We conducted a retrospective descriptive study of

children diagnosed with MIS-C between December 2020 and December 2025 in Pediatric Department D, Children's Hospital of Tunis. Clinical, laboratory, cardiovascular, treatment, and outcome data were retrospectively collected.

Results: We reviewed 19 cases. The sex ratio was 0.9 and median age at diagnosis was 6 years and 3 months (2.5–11 years). All patients fulfilled WHO diagnostic criteria for MIS-C. All presented with fever, with a mean duration of 8 days (4–12). Clinical manifestations included bilateral non-purulent conjunctivitis (14/19), cheilitis (13/19), skin rash (11/19), cervical lymphadenopathy (7/19), and arthralgia (3/19). Gastrointestinal symptoms were reported in eight patients.

All patients had systemic inflammation, with a mean CRP level of 190.44 mg/L (11.2–412.6) and mean ESR of 75 mm/h (31–125). Renal impairment occurred in two patients and hepatic cytolysis in three.

Cardiovascular involvement was observed in four patients, with hemodynamic instability in four and abnormal ECG findings in two. Troponin was elevated in five patients and NT-proBNP in four. Echocardiography was abnormal in 12 cases: myocardial involvement in five, pericarditis in four, and mitral regurgitation in four. Two patients required pediatric intensive care for hemodynamic support.

All patients received intravenous immunoglobulin (2 g/kg), systemic corticosteroids, and antiplatelet-dose aspirin. No patient developed persistent cardiac sequelae.

Conclusion: MIS-C can present with severe disease and cardiovascular involvement. Early recognition and prompt initiation of appropriate treatment are essential to achieve favorable outcomes and prevent long-term cardiac sequelae.

PHARMACIE

P-132: EVALUATION OF NURSES' KNOWLEDGE OF BLOOD-DERIVED MEDICINAL PRODUCTS AT KEF REGIONAL HOSPITAL

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Introduction: Blood-derived medicinal products (BDMPs) are essential therapies requiring strict traceability and vigilance. Nurses play a key role in their safe administration.

Aim: To assess nurses' knowledge of BDMPs, their traceability, and related vigilance systems.

Methods: A descriptive cross-sectional study was conducted among nurses from various care units at Kef Regional Hospital using a structured questionnaire covering the definition, identification, administration, traceability, and vigilance related to these products.

Results: Among 39 respondents, 70% gave a correct definition of a BDMP and 59% had already administered one. Administration frequency was rare for 54%, frequent for 25.6%, and daily for 20.5%. Only 48.1% knew BDMPs should not be co-administered with other drugs. Vigilance systems caused confusion: 36% cited hemovigilance, 36% pharmacovigilance, and 20% materiovigilance. The secure prescription form was correctly identified by 80% of participants, and traceability was recognized as mandatory by nearly all, though only 7.4% knew

the regulatory archiving duration. Responses to cold-chain breaks were heterogeneous: 40% would notify the physician or pharmacy, 17.4% would not administer the product, and 8.7% had no idea of the procedure. Albumin was correctly identified by 100% of respondents, whereas red blood cell concentrates (80%) and platelets (60%) were wrongly cited as BDMPs. Specialized products such as immunoglobulins, biological glues, and coagulation factors were markedly less recognized.

Conclusion: Knowledge was globally satisfactory regarding BDMP definition, traceability, and prescription rules, but gaps persist regarding vigilance systems, cold-chain break management, and specialized products. Targeted training is recommended, particularly on the cold chain, vigilance systems, and specialized BDMPs.

P-133: EVOLUTION OF PEMBROLIZUMAB USE AT SALAH AZAIEZ INSTITUTE: A RETROSPECTIVE STUDY (2023–2025)

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Introduction: Pembrolizumab is an anti-PD-1 immunotherapy widely used in oncology, with demonstrated survival benefits in several cancers, including lung cancer, melanoma, and triple-negative breast cancer. However, its high cost and expanding indications place increasing pressure on hospital budgets. This study aimed to assess trends in pembrolizumab consumption and related costs at Salah Azaiez Institute over three consecutive years (2023–2025).

Methods: A retrospective descriptive study was conducted from 2023 to 2025. All cancer patients receiving pembrolizumab (Keytruda®) at Salah Azaiez Institute were included. Demographic data, drug consumption, treatment protocols, and costs were collected using the Asclépios® software. Consumption was expressed as the number of 100 mg vials used, and costs were estimated based on hospital unit prices and converted into euros.

Results: A total of 28, 179, and 386 pembrolizumab preparations were performed in 2023, 2024, and 2025, corresponding to 10, 42, and 101 patients, respectively. The treated population was predominantly female, accounting for 78.6% of patients in 2024 and 81.2% in 2025. The average patient age was approximately 54 years, with a predominance of patients aged 40–59 years (50%). Pembrolizumab was administered at fixed doses of 200 mg or 400 mg per cycle, with an estimated total cost of €2,669,929 in 2025. Monotherapy accounted for 60% of treatment cycles, followed by carboplatin–paclitaxel–pembrolizumab combinations (25%). The rising financial burden was mainly driven by the increasing number of treated patients rather than higher unit costs, consistent with findings from Italian studies in metastatic non-small cell lung cancer.

Conclusion: Pembrolizumab consumption and associated hospital costs increased markedly between 2023 and 2025, mainly due to the growing number of treated patients, highlighting the major financial challenges of immunotherapy in real-world practice.

P-134: FLUOROPYRIMIDINE REGIMEN TOXICITY AND DOSE REDUCTION: A 315-PATIENT REAL-WORLD STUDY

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Introduction: Fluoropyrimidine-based regimens combined with oxaliplatin, irinotecan, cisplatin, or taxanes are key oncology standards of care but frequently cause overlapping cumulative toxicities, with regimen-specific signatures poorly characterized in real-world settings. This study aimed to quantify toxicity signatures and dose-reduction dynamics across these regimens.

Methods: This retrospective real-world study included patients treated with fluoropyrimidine-based combination regimens at the Institut Salah Azaiez between January and May 2026. Data were extracted from the Asclepius healthcare software and analyzed using Microsoft Excel. Adverse events were graded per CTCAE v5.0.

Results: The cohort comprised 315 patients (mean age 60.0±12 years; 58.6% male), predominantly colorectal/rectal (72.4%), cavum (8.3%) and gastric cancers (6.7%). Secondary dose adaptations occurred in 36.8% (n=116; 111 reductions, 4 protocol changes), by regimen: FOLFOX 47.0%, FOLFIRI 37.8%, FLOT 21.4%, TPF 6.1%. Leading triggers: Grade 2 toxicity (60.3%), poor tolerance (18.1%), Grade 3 toxicity (8.6%). Secondary 5-FU reductions occurred in 23.2% (n=73), driven by Grade ≥2 mucositis (4.1%), Grade ≥2 neutropenia (3.2%), and Grade ≥3 neutropenia (1.6%); hand-foot syndrome was rare (0.6%), with no cardiotoxicity. Oxaliplatin-exposed patients (n=183) had predominant neuropathy (grade ≥1: 28.4%, ≥2: 24.6%); 42.6% underwent reduction (10–50%). Irinotecan-exposed patients (n=80) had diarrhea as hallmark toxicity (20.0%; grade ≥2: 17.5%, grade 3: 1.2%); 25.0% required reduction. Docetaxel-exposed patients had grade 2 cutaneous toxicity and neuropathy each in 2.1%; 6.4% underwent reduction (20–25%). Completed cycles alone significantly predicted adaptation (6.3±3.0 vs 4.9±2.7; p<0.001).

Conclusion: Distinct toxicity signatures drive dose adaptation, with neurotoxicity and gastrointestinal toxicity as main determinants, supporting proactive monitoring.

P-135: VALIDATION OF A METACRESOL ASSAY METHOD USING THE ACCURACY PROFILE IN INSULIN GLARGINE PREPARATION

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Introduction: Metacresol is a preservative widely used in insulin glargine-based injectable solutions. In this context, accurate determination of its content is essential to ensure the quality and safety of the product. The aim of this study was to validate a method for the determination of metacresol in insulin glargine injectable solutions using high-performance liquid chromatography (HPLC).

Methods: Metacresol was quantitatively determined by reversed-phase liquid chromatography using a octadecyl column (250 mm × 4.6 mm internal diameter, 5 µm particle size). Chromatographic separation was achieved using a gradient elution program. Detection was performed at 214 nm,

with a flow rate of 1 mL/min and an injection volume of 10 μ L at 40°C. The method was validated using the accuracy profile approach. The beta tolerance probability was set at 80%, and the acceptance limit (λ) was set at $\pm 5\%$. Validation and calibration were performed over three days using five concentration levels: 0.16, 0.22, 0.27, 0.32, and 0.38 mg/mL.

Results: The Results demonstrated a linear relationship between measured and theoretical concentrations, with a coefficient of determination (R^2) greater than 0.99. Excellent repeatability and intermediate precision were observed, with coefficients of variation (CVs) not exceeding 1.6%. The retention time was 11 minutes. Recovery rates were close to $100 \pm 3\%$. The tolerance interval was entirely within the predefined acceptance limits for metacresol determination over the concentration range of 0.16 to 0.38 mg/mL.

Conclusion: The method was successfully validated and can be reliably used for the routine quality control of metacresol in injectable preparations over the concentration range of 0.16 to 0.38 mg/mL.

P-136: FLAT-RATE CHEMOTHERAPY IN TUNISIA: BALANCING PATIENT ACCESS AND PUBLIC HOSPITAL FINANCIAL VIABILITY

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Introduction: The agreement between the National Health Insurance Fund (CNAM) and Institut Salah Azaïez (ISA) establishes a standardized flat-rate pricing system designed to ensure the financial sustainability of anticancer treatments while facilitating patient access to care. This study aimed to evaluate its medico-economic and organizational impact.

Methods: A prospective study was conducted in January 2023, including all CNAM-affiliated patients managed at ISA. Data extracted from the STKMED software were analyzed according to the four conventional pricing groups.

Results: Following implementation of the flat-rate system, the number of patients increased by over 30%, with monthly billing exceeding €74,800. Group 1 (€48 flat rate) accounted for 52% of acts, with EC regimen predominating (33.5%) and a 7% cost overrun rate. Group 2 (€78) represented 32% of prescriptions, dominated by FOLFOX (53.8%), with carboplatin-paclitaxel generating a 17% overrun. Group 3 (€120), representing 13% of acts, appeared overestimated (maximum actual cost: €71) with no overruns recorded. Conversely, Group 4 (€420, 2% of acts) underestimated complex protocols: ifosfamide predominated (62%), with the IE regimen reaching a mean cost of €680 and a 24% overrun rate. Coding compliance was 100%, although 98% of invoices showed a one-day entry delay. Nine frequently used protocols and elastomeric devices remain outside the convention.

Conclusion: The CNAM-ISA agreement successfully balances cost containment and treatment accessibility. Adjusting extreme flat rates and integrating medical devices would further enhance its efficiency.

P-137: IMPACT OF STAGE COATING AND FLOW KINETICS ON THE AERODYNAMIC PARTICLE SIZE DISTRIBUTION OF GLYCOPYRR

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Introduction: The therapeutic efficacy of dry powder inhalers (DPIs) is inherently linked to their Aerodynamic Particle Size Distribution (APSD), which dictates deep lung deposition. While the Next Generation Impactor (NGI) is the recognized standard for APSD characterization, its accuracy can be compromised by particle bounce and re-entrainment.

This study investigated the influence of stage coating materials (glycerol vs. silicone) and variable inspiratory flow rates (30, 60, and 100 L/min) on the deposition profile of Glycopyrronium bromide 50 μ g capsules.

Methods: Aerodynamic assessment was performed using an NGI coupled with a validated C18-HPLC method ($\lambda=210$ nm). A pressure drop of 4 kPa was maintained to simulate physiological conditions. Tests utilized 10-capsule sets to ensure quantifiable mass recovery across stages.

Results: Both glycerol and silicone coatings effectively mitigated particle bounce, yielding comparable deposition profiles at 30 L/min. However, glycerol demonstrated slightly superior adherence properties. Flow rate variations significantly altered the mass distribution; lower flow (30 L/min) resulted in major retention in intermediate stages 2 to 4, whereas higher flows shifted the deposition toward finer fractions. Total mass recovery consistently met pharmacopoeial standards across all experimental configurations.

Conclusion: The NGI method demonstrates high robustness regarding coating selection, though glycerol is preferred for optimal adherence. The significant impact of flow kinetics underscores the necessity of precise flow control to ensure the accuracy of APSD measurements during DPI development.

P-138: DELISTING OF HOMEOPATHIC MEDICINES IN FRANCE: PHARMACISTS' PERCEPTIONS AND BOIRON'S STRATEGIES

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Introduction: The delisting of homeopathic medicines from reimbursement in France in 2021 changed their economic and pharmacy-based environment, prompting pharmacists and manufacturers to adapt their practices.

Aim: To assess the perceived impact of delisting on community pharmacies and to analyze Boiron's adaptation strategies, including its financial evolution through 2025.

Methods: A mixed-Methods, descriptive, cross-sectional study combining a 20-item questionnaire administered to community pharmacists, a semi-structured interview with a Boiron sales manager, and an analysis of the company's financial data through 2025.

Results: Fifty pharmacists responded. All reported a decline in homeopathy sales, 62% had a negative impact on their

business, and 44% had reduced their stocks. 68% reported negative customer perception of the products, and 80% an increased use of alternative therapies. All expressed a need for further support. The interview confirmed a 25% drop in Boiron's French sales, partly offset by a 15% rise in online sales; the company introduced free pricing, diversified its product range, and strengthened its communication strategy. Revenue fell from €513.58 million in 2020 to €455.20 million in 2021 (-11.4%), rebounded to €534.20 million in 2022, then stabilized around €493.25 million in 2023, €487.60 million in 2024, and €501.11 million in 2025 (+2.8%).

Conclusion: Delisting led to a marked initial shock, followed by gradual adaptations. Diversification, communication, and pharmacist support emerge as key levers of resilience, warranting confirmation through larger-scale studies.

P-139: DATA-DRIVEN MEDICATION PROCESS OPTIMIZATION AT SFAX MILITARY HOSPITAL

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Introduction: The medication management process is complex, and its effective control is essential to ensure patient safety, continuity of care, and efficient use of resources. In a newly commissioned hospital (HMUS), the structured assessment of pharmaceutical processes represents an important tool for continuous improvement.

Our study aims to define and implement performance indicators for key medication management processes within the Pharmacy Department to improve their monitoring and control.

Methods: A descriptive study was conducted using a structured quality improvement approach based on the Plan–Do–Check–Act (PDCA) cycle. The study involved mapping medication management processes, developing process definition sheets, selecting performance indicators, and documenting them in indicator specification sheets. The indicators were incorporated into a performance dashboard. Data were compiled and analyzed using Microsoft Excel® for the period from January 2025 to April 2026.

Results: Four processes were identified: supply chain management, inventory management, pharmaceutical validation, and medication preparation and dispensing. The prescription fulfillment rate was 91%. The rates of expired and defective medications were 0.18% and 0.02%, respectively. During the first quarter of 2026, 260 pharmaceutical interventions were recorded, with an acceptance rate of 87%. Antibiotic consumption was 529.5 defined daily doses (DDD) per 1,000 patient-days in 2025. The mean preparation time was 67 minutes, and the mean inventory discrepancy rate was 17%. These Results were incorporated into a performance dashboard and used to guide an action plan.

Conclusion: The performance dashboard serves as a dynamic operational tool for identifying deviations, prioritizing corrective actions, and supporting continuous improvement of the medication management process.

P-140: IMPACT OF MUTIMODAL TRAINING ON APPROPRIATE MEDICAL DEVICE USE AMONG PARAMEDICAL STAFF

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Introduction: Safe medical device use requires adequate knowledge of appropriate handling, traceability, and medical device vigilance.

Aim: To assess the impact of multimodal training on medical device knowledge among paramedical staff and evaluate participant satisfaction.

Methods: A single-center before-and-after interventional study included 40 paramedical professionals at the Military University Hospital of Sfax. Training combined theoretical instruction with a game-based card activity matching medical device pictograms to their meanings. Knowledge was assessed using a seven-item test administered immediately before and after training. An anonymous five-point Likert questionnaire assessed organization, content, facilitation, educational benefit, and overall satisfaction.

Results: Mean knowledge scores increased from 4.1/7 (58.6%) before training to 6.1/7 (87.1%) after training, with a mean gain of 2 points and a 48.8% relative improvement. Overall satisfaction reached 95.0%. Favorable ratings were 97.5% for facilitation, 95.0% for content and overall satisfaction, 92.5% for educational benefit, and 90.0% for organization.

Conclusion: Multimodal training combining theoretical instruction, pre-post assessment, and game-based learning immediately improved paramedical staff knowledge and achieved high satisfaction. This approach may support appropriate medical device use and continuing professional development in hospital practice, while promoting safer patient care practices.

P-141: FROM PRESCRIPTION TO VALIDATION: EXPLORING DELAYS IN CHEMOTHERAPY PREPARATION PROCESSING

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Introduction: The interval between electronically prescribed medications and their pharmaceutical validation constitutes the initial stage in the chemotherapy formulation process, and it affects all subsequent processing times. This study aimed to determine the time required for pharmacists to validate injectable chemotherapy prescriptions, to identify influencing factors, and to evaluate the impact of verifying patient care coverage.

Methods: A prospective, single-center observational study was conducted over two days in the cytotoxic drug preparation unit of Salah Azaiez Institute. Study staff recorded the time interval called D1 between prescription and pharmacist validation in Asclepios software. Drug prescriptions requiring CNAM coverage verification were separated out. D1 was compared between Day 1 and Day 2 and between prescriptions requiring coverage verification and standard prescriptions using Mann–Whitney U test. Statistical significance was set at $p < 0.05$.

Results: A total of 123 prescriptions were included. The mean D1 was 6.8 min (1–64) on Day 1 and 10.1 min (1–80) on Day 2, with a significant difference between the two days ($p = 0.004$). This difference was explained by the higher proportion of prescriptions requiring coverage verification on Day 2 compared with Day 1 (48.3% vs. 24.6%). D1 was significantly longer for prescriptions requiring coverage verification ($n = 44$; 13.6 min)

than for standard prescriptions ($n = 79$; 5.4 min), corresponding to a 2.5-fold increase in validation time ($p < 0.0001$). For some prescriptions with atypical delays, the causes were identified: expired coverage awaiting renewal, absence of valid coverage leading to treatment cancellation, or patient unfamiliarity with the coverage process.

Conclusion: The pharmaceutical validation time is extended by coverage verification, which is currently paper-based. Its digitalization and better coordination among actors could reduce wait times and improve patient care.

P-142: ECHINOCANDIN USE IN CLINICAL PRACTICE: CONSUMPTION PATTERNS IN A TUNISIAN UNIVERSITY HOSPITAL

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Introduction: Echinocandin are key antifungal agents mainly used for the management of severe invasive fungal infections and immunocompromised patients. In this study, we aim to describe Echinocandin's prescribing patterns.

Methods: It's a retrospective descriptive study conducted in the pharmaceutical department 'A' of Hedi Chaker Hospital Sfax during the first half of 2026. Patient and treatment information were collected from validated patient files (prescriptions/letters) and STKMED. Consumption per Hospital unit was expressed in Daily Defined Dose (DDD)/1000 Hospital Days. Analysis was performed using Excel and SPSS 27.0.1.0.

Results: Overall, 25 patients were treated with echinocandins, of which 20 received caspofungin (Figure). The median age for caspofungin patients was 9 years old [1 month - 60 years]. The median treatment duration was 10 days, reaching a maximum of 32 days corresponding to a pulmonary aspergillosis patient suffering from hepatic cytolysis due to prior voriconazole treatment.

The most frequent caspofungin indications were febrile neutropenia (34.8%) and septic shock; an off-label indication (21.6%). 52.2% of caspofungin prescriptions were consecutive to prior systemic antifungal treatment which caused side effects due to its use (in half of these cases). In one case, a patient with suspected immunodeficiency and a confirmed fluconazole and anadulafungin allergy received 3 treatment courses within a 45 day interval.

Conclusion: Our study highlights a predominant clinical use of caspofungin over anidulafungin in our hospital and its frequent use as a second-line therapy when the first-line antifungal treatment is contraindicated or ineffective. Thus, continuous efforts rationalizing systemic antifungal prescriptions and monitoring resistance patterns is essential.

PHYSIOLOGIE ET EXPLORATIONS FONCTIONNELLES

P-143: BEYOND TYPE 1/TYPE 2: GENOMICS AND "OMIC" CLUSTERS FOR PRECISION DIABETES MANAGEMENT

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Introduction: The traditional classification of diabetes into two primary types (Type 1 and Type 2) no longer captures the complex pathophysiological heterogeneity encountered in clinical practice. Precision medicine seeks to replace the standardized "one-size-fits-all" approach with targeted strategies based on individual genetic, biological, and environmental profiles. This study synthesizes the impact of novel biomarkers and genomics in personalizing diabetes care.

Methods: A systematic review of recent scientific literature (2018-2025) was conducted, analyzing advancements in genomics, pharmacogenomics, and novel cluster-based classification systems applied to metabolic risk stratification.

Results: The integration of clinical and "omic" data now enables a refined stratification of diabetes into five distinct clusters. Among these, the Severe Insulin-Resistant Diabetes (SIRD) cluster is particularly noteworthy, as it identifies patients at high risk for early nephropathy, justifying the targeted prescription of SGLT2 inhibitors. Furthermore, molecular diagnosis of monogenic diabetes (MODY) remains the most successful model of this approach; for instance, HNF1A mutations allow for a therapeutic transition from insulin to sulfonylureas with superior glycemic efficacy. This personalization is reinforced by pharmacogenomics, which predicts individual responses to metformin or GLP-1 receptor agonists, and by digital phenotyping via Continuous Glucose Monitoring, offering dynamic adjustments tailored to each patient's unique glycemic variability.

Conclusion: Precision medicine is transforming diabetes management from a uniform chronic disease model into a predictive and individualized framework. Although access to genetic testing and the high cost of biomarkers remain significant hurdles, this transition is essential for preventing long-term complications. The future of the field lies in integrating Artificial Intelligence to bridge complex biological data with daily clinical monitoring, ensuring optimal therapeutic outcomes.

P-144: GRADING CONFIRMED RESTRICTION: CONCORDANCE BETWEEN FEV1- AND TLC-BASED SEVERITY

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Introduction: The 2022 ERS/ATS technical standard introduced z-score-based severity grading for pulmonary function impairment, yet this framework was conceived primarily for airflow obstruction. Whether FEV1-derived severity faithfully mirrors the magnitude of volumetric loss once restriction has been objectively established by total lung capacity (TLC) remains unclear.

We aimed to assess the agreement between FEV1- and TLC-based severity grading in patients with plethysmographically confirmed restriction.

Methods: We conducted a cross-sectional study of patients undergoing body plethysmography at Farhat Hached University Hospital, Sousse, Tunisia. Restriction was defined as TLC z-score < -1.645 . Z-scores were calculated using the Global Lung Function Initiative (GLI) 2012 reference equations for spirometry and GLI-2021 equations for static lung volumes.

Severity was graded using FEV1 and TLC z-scores according to the ERS/ATS 2022 three-level framework: mild (-1.65 to -2.5), moderate (-2.51 to -4.0), and severe (<-4.1). Concordance was quantified using quadratic weighted Cohen's κ , with a sensitivity analysis excluding airflow obstruction.

Results: Among 175 patients with interpretable TLC, 63 had confirmed restriction. Median FEV1 and TLC z-scores were -2.06 [-2.60; -1.47] and -2.30 [-3.28; -1.93], respectively. FEV1 and TLC z-scores were moderately correlated (Spearman $\rho=0.477$, $p<0.001$), whereas their paired distributions differed significantly (Wilcoxon $p<0.001$). Exact severity agreement occurred in 23/63 patients (36.5%), with a quadratic weighted κ of 0.48. TLC-based grading indicated greater impairment than FEV1-based grading in 32/63 patients (50.8%), whereas FEV1 did so in 8/63 (12.7%). Notably, 23/63 patients (36.5%) with confirmed restriction had an FEV1 z-score within the normal range. Similar findings were observed after exclusion of airflow obstruction.

Conclusion: FEV1- and TLC-based severity showed only moderate agreement despite significant correlation between their z-scores, with FEV1-based grading classifying a substantial proportion of patients as less severely impaired than TLC-based grading. These findings highlight the potential limitations of FEV1-based severity grading in confirmed restriction and support consideration of TLC-based severity reporting.

P-145: NORMAL SPIROMETRY, ABNORMAL LUNG VOLUMES: UNCOVERING HIDDEN PHYSIOLOGICAL PHENOTYPES

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Introduction: Spirometry is the cornerstone of pulmonary function testing, and normal indices are often considered reassuring. Yet, spirometry provides no direct assessment of static lung volumes, potentially masking clinically relevant abnormalities. We aimed to determine the prevalence and spectrum of plethysmographic abnormalities among patients with strictly normal spirometry.

Methods: We conducted a cross-sectional study of patients referred for pulmonary function testing at Farhat Hached University Hospital. Normal spirometry was defined a priori as FEV1, FVC and FEV1/FVC z-scores all ≥ -1.645 . Plethysmographic abnormalities were defined by reduced Total Lung Capacity (TLC) (z-score <-1.645), elevated Residual Volume (RV)/TLC (z-score $>+1.645$), and gas trapping based on a Slow Vital Capacity (SVC)-FVC difference >100 ml. Z-scores were calculated using Global Lung Function Initiative (GLI) 2012 reference equations for spirometry and GLI 2021 for static lung volumes.

Results: Among 210 patients, 107 fulfilled criteria for normal spirometry, of whom 95 had adequate plethysmographic data. Despite normal spirometric indices, 45.3% of patients demonstrated at least one abnormal plethysmographic profile. Reduced TLC consistent with restriction was observed in 18.9% of cases, elevated RV/TLC consistent with hyperinflation was observed in 6.3% of cases, and gas trapping was present in 26.3% of cases. Abnormalities overlapped in several patients. Distinct phenotypes included isolated gas trapping (20.0%), isolated restriction (15.8%), isolated elevation of RV/TLC (3.2%), restriction with gas trapping (3.2%), and elevated RV/TLC with gas trapping (3.2%). No demographic or anthropometric factor

was independently associated with an abnormal profile (all $p>0.2$).

Conclusion: Nearly half of patients with strictly normal spirometry had an abnormal static-volume profile, encompassing distinct restrictive and air-trapping phenotypes. These findings challenge the assumption that normal spirometric indices necessarily reflect normal respiratory physiology and suggest that clinically relevant abnormalities may remain concealed when static lung volumes are not assessed.

P-146: 2012 GLI RACE SPECIFIC VS 2023 GLI RACE NEUTRAL: DIAGNOSING AND CLASSIFYING OBSTRUCTION IN CHILDREN

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Introduction: The Global Lung Function Initiative Caucasian group (2012-GLI-C) equations are the current standard used in clinical practice in Tunisia. However, the 2023-race-neutral (2023-GLI-N) equations are gaining traction. This study compared the impact of using 2012-GLI-C vs. 2023-GLI-N equations on the diagnosis and severity classification of airflow obstruction (AO) in a sample of North African children.

Methods: This analytical study was conducted at the department of physiology and the private international center of functional explorations. Spirometric data (FEV1, FVC, and FEV1/FVC) were converted into z-scores using both equations. The diagnosis of airflow obstruction (ie; FEV1/FVC z-score <-1.65) and its severity classification based on FEV1 z-score (mild (z-score: -1.65 to -2.50), moderate (z-score: -2.51 to -4.00), severe (z-score >-4.00) were compared using Cohen's kappa and McNemar tests.

Results: A total of 737 validated records were included; 55.2% of the children were male, and the median age was 10.25 years. The binary diagnostic yield for AO showed near-perfect agreement between the two equations ($\kappa = 0.988$, $p < 0.001$). 2012-GLI-C equations identified 91 patients (12.3%) with AO, compared with 93 (12.6%) using 2023-GLI-N equations, with no statistically significant difference in the overall diagnostic rate ($p = 0.500$). However, severity stratification demonstrated a significant difference ($p = 0.012$). Among patients classified as having moderate AO under 2012-GLI-C equations, 36.8% were reclassified as mild using 2023-GLI-N equations. Similarly, 50.0% of patients classified as having severe AO under 2012-GLI-C equations were reclassified as moderate under the 2023-GLI-N equations.

Conclusion: Adopting 2023-GLI-N equations does not significantly alter the binary diagnosis of AO but systematically shifts the clinical stratification toward less severe categories compared to 2012-GLI-C equations in North African children.

P-147: DE NOVO THYROID DYSFUNCTION IN CRITICALLY ILL PATIENTS: PREVALENCE AND OUTCOMES

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Introduction: Thyroid hormones are pivotal regulators of metabolism, cardiovascular stability, and neurological function. In the Intensive Care Unit (ICU), thyroid axis dysregulation is frequent and often reflects the severity of the underlying critical illness. This study explores the prevalence, risk factors, and prognostic value of newly diagnosed thyroid dysfunction in ICU patients.

Methods: A retrospective observational study was conducted over 33 months (July 2022 to March 2025) at the Medical ICU of Farhat Hached University Hospital, Sousse. We included 64 adult patients with no prior history of thyroid disease. Data collection included demographics, severity-of-illness scores (APACHE II, SAPS II), and clinical outcomes, including acute kidney injury (AKI), invasive mechanical ventilation (IMV), length of stay (LOS), and mortality. Statistical significance was set at $p < 0.05$.

Results: Thyroid anomalies were identified in 45.31% of the cohort. Specifically, 28.12% presented with isolated low T4 (normal TSH), while hyperthyroidism and hypothyroidism were found in 6.25% and 10.94% of cases, respectively. Patients with thyroid dysfunction exhibited significantly higher APACHE II and SAPS II scores. Although mortality was higher in the thyroid dysfunction group (24.1% vs. 5.17%), the difference did not reach statistical significance. In univariate analysis, pneumonia upon admission, IMV and its duration, vasopressor support, and the timing of thyroid testing after admission were significantly associated with mortality among patients with thyroid anomalies ($p < 0.05$).

Conclusion: De novo thyroid dysfunction is highly prevalent in the ICU and serves as a marker of clinical severity. Our findings suggest that systematic assessment of the thyroid axis could enhance early risk stratification. However, further prospective research is required to determine whether targeted management of these hormonal imbalances can improve clinical outcomes and survival in critically ill populations.

P-148: IMMEDIATE HORMONAL SCREENING IN SEVERE NEONATAL HYPOGLYCEMIA: AN ALTERNATIVE TO 72-HOUR OBSERVATION

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Introduction: Current American Academy of Pediatrics (AAP) guidelines suggest a 48 to 72- hour observation period before investigating neonatal hypoglycemia, often attributing early episodes to transient physiological adaptation. This study aims to evaluate the diagnostic relevance of an immediate, systematic hormonal screening (BHS1) initiated at the very first episode of severe hypoglycemia.

Methods: A 6-month descriptive study was conducted involving 29 neonates presenting with severe hypoglycemia (< 0.45 g/L or < 2.8 mmol/L), regardless of clinical symptoms (78% presented with hypotonia or seizures). The immediate endocrine panel (BHS1) included GH, Cortisol, ACTH, Insulin, and C-peptide.

Results were interpreted using established diagnostic cut-offs: Insulin > 2 μ UI/mL (inappropriate), GH < 20 ng/mL, and Cortisol < 180 ng/mL under hypoglycemic stress.

Results: The systematic hormonal workup was diagnostic in 69% of cases ($n=20/29$). This approach identified growth hormone deficiencies (38%), corticotrophic insufficiencies (21%), and hyperinsulinism (10%). Notably, one case of insulinoma was confirmed with insulin levels at 35 μ UI/mL despite severe hypoglycemia (1.0 mmol/L).

Discussion: Our findings reveal an exceptional diagnostic yield of 69%, significantly higher than the $< 5\%$ yield reported in literature for unselected hypoglycemia cases. By targeting severe episodes early, the BHS1 identified critical endocrine pathologies that would have been missed or delayed by following the traditional 72-hour "wait-and-see" dogma.

Conclusion: With nearly 7 out of 10 assessments providing a clear diagnosis, systematizing an early endocrine panel is highly justified in cases of severe neonatal hypoglycemia. Moving beyond traditional recommendations to implement screening at the first severe

P-149: COUNTER-REGULATORY ENDOCRINE FAILURE IN SEVERE NEONATAL HYPOGLYCEMIA: BEYOND TRANSIENT PHYSIOLOGICAL

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Introduction: Maintaining glycemic homeostasis in neonates requires the robust activation of somatotrophic and corticotrophic axes, coupled with effective insulin suppression. Severe hypoglycemia (≤ 0.45 g/L) often signals a breakdown in this delicate balance. This study analyzes the response profiles of counter-regulatory hormones (GH, Cortisol) and insulin in neonates experiencing acute metabolic stress.

Methods: We retrospectively reviewed the hormonal profiles of 29 neonates. Samples were collected during the "critical window" of severe symptomatic hypoglycemia. The analysis focused on the maximum secretory capacity of GH and cortisol, alongside the failure of insulin suppression. Electrolyte data (Na^+/K^+) were correlated with hormonal findings to identify markers of clinical severity.

Results: Hormonal maladaptation was observed in 69% of cases ($n=20/29$), highlighting a significant failure of counter-regulatory mechanisms. An impaired somatotrophic response was the most prevalent finding (38%), with GH levels failing to rise above 15 ng/mL. Corticotrophic insufficiency was identified in 21% of neonates (cortisol < 50 ng/mL), where severe cases were strongly associated with hyponatremia (< 130 mmol/L). Furthermore, a lack of insulin inhibition (> 2 μ U/mL) confirmed hyperinsulinism in 10% of cases. Only 31% of the cohort exhibited a physiological response to stress (high GH/cortisol with suppressed insulin), suggesting an organic rather than transient etiology in the majority of severe cases.

Conclusion: Our findings indicate that severe neonatal hypoglycemia is rarely a simple "adaptation delay." Instead, it frequently represents a multi-hormonal failure and serves as a major predictor of underlying endocrine pathology. Systematic hormonal profiling during severe episodes allows for a paradigm shift: moving from purely symptomatic treatment

(glucose infusion) to targeted pathophysiological management (hormone replacement therapy), thereby preventing global metabolic decompensation.

P-150: HYPERPROLACTINEMIA IN ASSISTED REPRODUCTION: INTERPLAY BETWEEN THYROID FUNCTION AND OVARIAN RESERVE

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Introduction: Hyperprolactinemia (HPRL) is a frequent finding in infertility, affecting approximately 9% to 17% of women. By disrupting GnRH pulsatility, it induces dysovulation through functional hypogonadotropic hypogonadism. In the context of Assisted Reproductive Technology (ART), the interaction between HPRL, ovarian reserve markers, and the thyrotropic axis can complicate the response to controlled ovarian stimulation. This study analyses the etiological and hormonal characteristics of patients presenting with HPRL Within an ART cohort.

Methods: A retrospective study was conducted including 74 patients undergoing infertility evaluation. Parameters analysed included basal prolactin levels, ovarian reserve markers (AMH, FSH), thyroid function (TSH, anti-TPO antibodies), and menstrual cycle regularity.

Results: The prevalence of HPRL in our cohort was 18.5%, consistent with international data for infertile populations. Menstrual irregularities were the primary clinical sign, with 76% of patients presenting with spaniomenorrhea or amenorrhea. A strong correlation was found with thyroid pathology: 25% of HPRL patients exhibited subclinical or overt hypothyroidism (mean TSH >4.2 mIU/L), confirming the stimulatory role of TRH on lactotroph cells. Within the Polycystic Ovary Syndrome (PCOS) subgroup, HPRL was present in 12% of cases and significantly associated with high AMH levels (mean > 5.8 ng/mL; $p < 0.05$) These findings suggest that moderate HPRL may exacerbate follicular arrest in patients with an already high ovarian reserve.

Conclusion: HPRL is rarely an isolated finding in ART consultations. Its frequent association with hypothyroidism and PCOS necessitates systematic thyroid screening. Normalizing prolactin levels remains a mandatory prerequisite to restore the implantation window and optimize follicular recruitment, thereby preventing costly stimulation failures and improving ART outcomes.

RADIOTHÉRAPIE CARCINOLOGIQUE

P-151: REVERSING TOTAL NEOADJUVANT THERAPY IN LOCALLY ADVANCED RECTAL CANCER: A REAL-WORLD STUDY

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Introduction: Total neoadjuvant therapy (TNT) has become a standard strategy for locally advanced rectal cancer (LARC), improving treatment completion and pathological response rates. However, the optimal sequence of chemotherapy and radiotherapy remains debated, and data on chemotherapy-first TNT followed by short-course radiotherapy are limited, particularly in resource-constrained settings. This study evaluated the feasibility and outcomes of a reversed-sequence TNT strategy in LARC.

Methods: We conducted a retrospective single-institution study including 34 patients with LARC treated between 2018 and 2022. Patients received induction chemotherapy, followed by short-course radiotherapy and planned surgery. Pathological response, surgical outcomes, toxicity, overall survival (OS), and disease-free survival (DFS) were assessed. Survival outcomes were estimated using the Kaplan–Meier method.

Results: The median age was 60 years; 97.1% of patients had cT3–T4 disease and 94.1% were clinically node-positive. All patients completed radiotherapy, and 25 (73.5%) underwent surgery. Pathological complete response was achieved in 32.0% of operated patients, with ypN0 status in 88.0%. R0 resection was achieved in 88.0%, and sphincter preservation in 76.0%. Treatment was well tolerated; peripheral neuropathy was the most common chemotherapy-related adverse event (29.0%), and diarrhea was the main radiotherapy-related toxicity (23.5%). After a median follow-up of 15.6 months, 1-year OS was 81.4%, and 1- and 2-year DFS rates were 76.1% and 71.9%, respectively.

Conclusion: A reversed-sequence TNT strategy consisting of induction chemotherapy followed by short-course radiotherapy was feasible and well tolerated in high-risk LARC. This approach may be a pragmatic option where radiotherapy access is limited. Prospective studies are needed to validate these findings.

P-152: DETECTING ERRORS BEFORE TREATMENT: THE IMPACT OF A RADIOTHERAPY SAFETY CHECKLIST

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Introduction: Radiotherapy treatment planning and delivery involve numerous complex steps requiring multidisciplinary collaboration, thereby exposing the treatment process to potential errors. Checklists have been proposed as a practical tool to standardize procedures, reduce errors, and improve coordination among healthcare professionals. This study aimed to identify the most frequent errors encountered by radiation therapy technologists and to assess the impact of implementing a checklist on treatment safety and professional practices.

Methods: A cross-sectional study was conducted in the Radiation Oncology Department of Abderrahmane Mami Hospital between December 2024 and February 2025. Data collection was performed in two phases.

First, a 15-item checklist in French, specifically developed for this study, was distributed to all radiation therapy technologists following a brief training session on its use and its role in patient safety. Each item required a yes/no response and had to be completed and verified by the radiation therapy technologists before each new treatment.

Second, a satisfaction questionnaire was administered to assess the radiation therapy technologists' experience, the perceived effectiveness of the checklist, its impact on treatment safety, and suggestions for

Results: Among 78 initial treatment setups, 63 checklists were completed. The most frequently identified errors were the

absence of a patient photograph in the electronic medical record (39%) and the absence of 3D images on the treatment sheet (31%). Other errors were observed in fewer than 6% of cases.

Regarding checklist use, 80% of radiation therapists considered it clear, and 67% reported that it was easily integrated into their daily practice. The majority of radiation therapists (73%) required between 1 and 5 minutes to complete the checklist.

Regarding its impact, 53% of radiation therapists reported an improved ability to detect incidents before treatment, while 60% reported improved communication and coordination within the team. During experience feedback meetings (CREX), 60% of participants observed significant improvement, while 13% reported minor improvement. Overall satisfaction with the checklist was high, with 60% of radiation therapists reporting that they were satisfied or very satisfied with its implementation.

Conclusion: This study identified the most frequent errors occurring throughout the radiotherapy process and demonstrated that implementing a safety checklist may improve error detection, enhance patient safety, and strengthen communication and coordination between radiation therapists and the multidisciplinary team. Well accepted by professionals, the checklist was associated with measurable improvements identified during experience feedback meetings, supporting its value as a practical tool